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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91161817
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Date	12/16/2005
Attachments	040 - 2005.12.16 Opposition to Applicant's Motion for Summary Judgment.pdf (17 pages) Exhibit 1.pdf (232 pages) Exhibit 2.pdf (13 pages) Exhibit 3.pdf (8 pages)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)	
)	
Opposer,)	
)	
v.	)	Opp. No.: 91/161,817
	)	App. No.: 78/235,618
	)	Pot. Mark: SENSORY MARK
MOTOROLA, INC.,	)	(911 Hz Tone)
)	
Applicant.)	
)	

**OPPOSER'S OPPOSITION TO APPLICANT'S
MOTION FOR SUMMARY JUDGMENT**

December 16, 2005

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Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
1	Nextel's Motion for Summary Judgment
2	Excerpts from Allison O'Reilly Deposition
3	Nextel Rule 30(b)(6) Notice of Deposition

**OPPOSER'S OPPOSITION
TO APPLICANT'S
MOTION FOR SUMMARY JUDGMENT**

I. Introduction

Nextel Communications, Inc.¹ opposed Motorola's registration of the 911 Hz Tone on the principal grounds that the 911 Hz Tone has not been used as a mark and that it is not distinctive. Now Motorola has moved for summary judgment, asking that Nextel's opposition be dismissed and its application for registration be granted, on the basis that Nextel has "failed to produce any evidence" that could support its grounds for opposition. Memorandum in Support of Applicant's Motion for Summary Judgment ("Mem.") at 1-2. But, as demonstrated in Nextel's own summary judgment motion, attached hereto as Exhibit 1, and as inadvertently confirmed by Motorola in its Statement of Facts, Mem. at 2-8, Nextel's grounds for opposition are proved as a matter of law by uncontroverted evidence produced by Nextel and by Motorola itself.

Dispositive evidence providing clear proof of a negative – that an applicant failed to use the applied-for designation as a trademark – would be difficult indeed to generate from an opposer's internal files, documents or witnesses. But during the course of discovery here, Nextel solicited Motorola's responses to interrogatories and requests for admission, collected Motorola's documents, deposed Motorola's Rule 30(b)(6) corporate designee, and deposed Motorola's survey consultant. Based principally on this evidence, Nextel filed its own summary judgment motion setting forth uncontroverted facts that establish the non-use of the 911 Hz Tone as a mark. *See* Ex. 1, Nextel SJM. This evidence, already presented to the Board in exhibits to

¹ Nextel Communications, Inc. merged with Sprint Corporation on August 12, 2005. However, the relevant entity was renamed Nextel Communications, Inc. and is referred to herein as "Nextel."

Nextel's motion, is plainly sufficient for the Board to conclude, as a matter of law, that Motorola's assertion of a failure of evidence is without merit and that its motion must be denied.

Even if Motorola had been correct that Nextel did not provide any facts of its own in its responses to discovery (a premise that is refuted below), Motorola has now been made fully aware of Nextel's contentions as a result of Nextel's separate summary judgment motion. As the Board has recently elucidated, the imposition of the "preclusion sanction" must be reserved for relatively extreme cases of failure or refusal to produce evidence, in order to avoid "unduly harsh" results. *See Vignette Corporation v. Steven Marino*, Opp. No. 91/155,854 (TTAB Nov. 29, 2005). This is most certainly not such a case.

Beyond its specious argument that Nextel has failed to produce evidence supporting its grounds for opposition, Motorola also makes a half-hearted argument that the evidence supports registration of the 911 Hz Tone. Mem. at 13-16. In doing so, it recites facts that essentially coincide with those set forth in Nextel's motion for summary judgment. *Cf.* Mem. at 2-4 with Ex. 1, Nextel SJM, at 2-9. For the reasons set forth in Nextel's motion, and as further discussed below, the uncontroverted facts compel the conclusion that the 911 Hz Tone is not entitled to registration, as a matter of law.

II. Argument

A. Nextel Has Met Its Evidentiary Burden in Proving That Motorola Has Not Used the 911 Hz Tone as a Trademark in Connection with Two-Way Radios.

Both sides have produced documents, responded to interrogatories, and taken depositions in this proceeding, and the question of whether Motorola has used the 911 Hz Tone as a mark sufficient to support registration is ripe for review. Motorola's argument that Nextel's alleged failure to produce evidence should lead to the dismissal of the opposition at this stage of the

proceeding, without ever reaching the question of whether Motorola has satisfied the most basic statutory prerequisite for registration, is wrong as a matter of both law and fact.

Motorola relies on the Supreme Court's decision in *Celotex Corp. v. Catrett* for its argument that summary judgment must be entered against Nextel if Motorola merely "points out" that there is an absence of evidence to support Nextel's case. Mem. at 2, 9. But the moving party must affirmatively show the absence of such evidence, based on the "pleadings, depositions, answers to interrogatories, and admissions on file" if not on separate affidavits. *Celotex Corp. v. Catrett*, 477 U.S. 317, 324 (1986); *see also id.* at 332 (Brennan, J., dissenting). And even assuming that the moving party meets that burden, the "nonmoving party may defeat a motion for summary judgment that asserts that the nonmoving party has no evidence by calling the Court's attention to supporting evidence already in the record that was overlooked or ignored by the moving party." *Id.* at 332 (Brennan, J., dissenting) (characterizing portions of the plurality opinion from which he did not dissent) (emphasis added). Motorola has overlooked or ignored such evidence in its motion here.

1. Nextel's Own Evidence.

Motorola claims that Nextel's only evidence of non-use, adduced in Nextel's interrogatory responses and deposition testimony, is that Nextel was "not aware" of Motorola's use of the 911 Hz Tone. Mem. at 5-6, 8, 10-11. It asserts that Nextel's "unawareness" is due to the supposed fact that Nextel "is not in the two-way radio market." *Id.* at 10 fn 1. But Nextel's Rule 30(b)(6) witness, its then Director of Promotions and Retail Marketing Allison O'Reilly, testified that Nextel does operate in the public safety sector market in which Motorola's two-way radios are sold. *See* Ex. 2, O'Reilly Depo. Excerpt, at 45, 47. Ms. O'Reilly contacted Nextel employees who are directly engaged with the public safety sector market and who attended trade shows where Motorola promoted its two-way radios and would otherwise have come into contact

with Motorola's advertisements, if there had been any. *Id.* at 18, 20-21, 32. None of those people reported being aware of or having seen or heard any advertisement or other instance of use of the 911 Hz Tone that would constitute trademark use. *Id.* at 39, 41. Under these circumstances, the fact that Nextel and its 30(b)(6) witness were "unaware of any instances in which Applicant has used the 911 Hz Tone as a mark in commerce in connection with two-way radios," *see* Mem. at 10, is evidence directly supporting Nextel's argument in opposition to the registration.

Nextel also produced, in response to Motorola requests for documents relating to the non-use of the Tone as a mark, a copy of Motorola's 911 Hz Tone trademark application file, including the specimen. *See* Mem. at 6, 7. Motorola claims these documents are evidence of use, not non-use. Mem. at 11. But on their face, they raise a substantial question as to whether the alleged mark meets the requirements for trademark registration. The application file includes the statement that the specimen is a "sound file that contains a sound that emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak." Ex. 1, Nextel SJM, at Ex. 3, 911 Hz Tone Application File Wrapper (emphasis added). The specimen itself is a CD that merely plays the 911 Hz Tone. No advertising use or any other use of the Tone as a mark is evident on the face of the application or apparent from the specimen. On the contrary, the description of the specimen describes the alleged mark in its function as an operational signal, not as a trademark. As set out in Nextel's summary judgment motion, these facts directly support Nextel's argument in opposition to the registration.

Thus, Nextel did produce evidence in response to discovery requests that supports its opposition claim that Motorola has not used the 911 Hz Tone as a mark. Under the *Celotex* standard, this fact alone would compel the denial of Motorola's summary judgment motion.

2. Motorola Evidence Elicited by Nextel.

During the course of discovery, Nextel also elicited significant evidence from Motorola itself that confirmed that Motorola has never used the 911 Hz Tone as a trademark. Rather than repeat all of the evidence in the record that supports this conclusion, we provide the following summary, and direct the Board's attention to Nextel's summary judgment motion, which fully sets out the evidence of non-use, and is attached hereto as Exhibit 1.

Nextel deposed Motorola's Rule 30(b)(6) corporate designee, David Klein, about a number of topics, including "[p]ast and current uses of the 911 Hz Tone with the 911 Hz Tone Products." Ex. 3, Notice of Deposition, at 4-5. Nextel asked Mr. Klein to state all of the various ways in which Motorola uses the 911 Hz Tone. In response, Mr. Klein specified the five possible circumstances in which consumers may actually encounter the 911 Hz Tone: (i) when being trained in the use of the product; (ii) when attending a trade show; (iii) when viewing a sales representative's demonstration; (iv) when using the product after purchase; or (v) when hearing someone else using the product. Ex. 1, Nextel SJM (citing Ex. 4, Klein Depo. Excerpt at 45, 117-120). Mr. Klein readily confirmed that in each of those circumstances, the 911 Hz Tone specifically and exclusively denotes the activation of the "Talk-Permit" or "Call-Back" feature of the product. *Id.* at 110 (training), 103-04, 123 (trade shows); 104-05 (sales demo); 42-43 (use of product; 119 (others' use in the field). As explained in Nextel's summary judgment motion, such functional uses of an audible operational signal do not, without more, constitute use as a trademark. Ex. 1, Nextel SJM, at pp. 13-16.

In its Interrogatories, Nextel requested that Motorola "[d]escribe in detail the manner in which Applicant purports to use or have used the 911 Hz Tone in commerce, and identify all documents that evidence said use." Ex. 1, Nextel SJM, at Ex. 6, Motorola's Int. Resp., at 4 (Interrogatory No. 6). Motorola responded, in relevant part, that:

Applicant has used the 911 Hz Tone in commerce by, among other things, offering to sell and selling two-way radios and cellular telephones that contain the chip referred to above (*see* Response to No. 5) and from which the Tone can be heard.

Id. at 4 (emphasis added). In fact, the 911 Hz Tone is but one of over a dozen different audible tones that emanate from the two-way radios, each signifying the activation of a different operation or feature of the radio. *See* Ex. 1, Nextel SJM, at ¶ 11. As explained in Nextel's summary judgment motion, the mere act of selling products that "contain" the alleged mark intermingled with a number of other similarly functional signal tones is not trademark use, and as such does not entitle Motorola to a trademark registration. *See* Ex. 1, Nextel SJM, at pp. 10-16.

Nextel also requested that Motorola produce all documents "that evidence how Applicant used, uses, and will use the 911 Hz Tone in any way (including advertising, labels, packaging, displays and promotion)." Ex. 1, Nextel SJM, at Ex. 10, Motorola's Resp. to Doc. Req., at 3 (Doc. Req. No. 3). Motorola produced two boxes of documents in response to this request. None of the documents contained the 911 Hz Tone, nor could they have, as they were all written documents. Motorola asserts that those documents "describe" the 911 Hz Tone, Mem. at 3, but a written description of a sound mark does not constitute use of the mark. *See* Ex. 1, Nextel SJM, at p. 14, fn. 6.

Motorola did produce two CDs that contained various audiovisual advertisements of Motorola two-way radio products, but none of those advertisements actually play the 911 Hz Tone at all, nor make any reference to it whatsoever. Mr. Klein confirmed this, and testified that Motorola does not run any audiovisual advertising of its two-way radios where the 911 Hz Tone is heard. *See* Ex. 1, Nextel SJM at Ex. 4, Klein Depo. Excerpt, at 117. Motorola also produced a CD that incorporated interactive training modules, which played the 911 Hz Tone along with all the other tones emitted by the two-way radios. Mr. Klein testified that Motorola had an on-

line training method, with which he was not familiar but which he believed “has interaction with describing the product, describes the tone, actually plays the tone so you can audibly hear the sound of the Talk-Permit tone.” Mem. at Ex. 2 (Klein Depo) at 109-10; *see also* Mem. at 3 (the sound “is also heard through a ‘on-line method’ that ‘actually plays the tone.’”) Mr. Klein was not certain whether the interactive training program produced on the CD was the same as the on-line training method, Mem. at Ex. 2 (Klein Depo) at 110-112, but Motorola did not produce any other interactive training modules. As explained above, such training use, which demonstrates the tone specifically and exclusively to denote the activation of the “Talk-Permit” or “Call-Back” feature of the product, does not constitute trademark use of the sound.

Remarkably, essentially all of the facts cited by Motorola in support of its summary judgment motion are also cited in Nextel’s own summary judgment motion. The issue of whether those undisputed facts demonstrate that the 911 Hz Tone has not been used as a mark is thus ripe for decision as a matter of law, as urged by Nextel in its motion. But under no circumstances could summary judgment be granted to Motorola on the first ground it asserts – that Nextel has failed to produce evidence to support its claim.

B. Nextel Need Not Prove That the 911 Hz Tone Lacks Distinctiveness, But the Evidence Supports That Conclusion Nonetheless.

Motorola argues that Nextel has not, and cannot, meet the evidentiary burden of proving that the 911 Hz Tone lacks distinctiveness. Mem. at 12. As Nextel has demonstrated, however, it is unnecessary to show a lack of distinctiveness where the alleged mark has not met the statutory prerequisite of having been used as a trademark. Ex. 1, Nextel SJM, at p. 18.

In any event, the evidence here demonstrates that the 911 Hz Tone is not inherently distinctive and has not acquired distinctiveness. First, even an allegedly distinctive product feature, however unique, will not be found inherently distinctive if it merely follows industry

practice and meets consumer expectations for such a product. *See, e.g., CITC Indus. Inc. v. Levi Strauss & Co.*, 216 U.S.P.Q. (BNA) 512 (TTAB 1982); *Anchor Hocking Glass Corp. v. Corning Glass Works*, 162 U.S.P.Q. (BNA) 288 (TTAB 1969). As discussed in Nextel's Motion, consumers expect that electronic devices, such as two-way radios and cell phones, contain a number of different electronic signal tones to alert them to the activation of different functions or events. *See* Ex. 1, Nextel SJM, at pp. 14-16. In these circumstances, the 911 Hz Tone cannot be considered "inherently distinctive," notwithstanding Motorola's bald claim that "it is clear" that the sound is "unique or different." Mem. at 13.

The two marks that Motorola refers to in its brief are inapposite to the facts of this case in that the tones registered in those two situations do not follow industry practice or meet consumer expectations as to the goods and services claimed in those applications. "A series of five chirps similar to the chirping sound of a cricket" can hardly be considered "expected" or "industry practice" in relation to software. *See* Mem. at Ex. 10. Nor does the "sound of a kiss made when, for example, one is 'blowing a kiss' to another person" bear any expected relation to "commercial and residential building construction." *Id.* at Ex. 11.

The evidence also establishes that the 911 Hz Tone has not acquired distinctiveness. As discussed in Nextel's summary judgment motion, Ex. 1, Nextel SJM, at p. 18-19 & fn. 8, and as further discussed below, Motorola's survey could at most be considered to have demonstrated an awareness among some users of the source of a conspicuously branded product rather than any association of the Tone itself with a particular source. *Id.* And in any event, the study's results are insufficient to meet the Board's standard for finding acquired distinctiveness. *Id.* Even if Nextel were required to demonstrate the lack of distinctiveness of the 911 Hz Tone

notwithstanding the fact that it has not been used as a mark, all of the evidence in the record supports the conclusion that the 911 Hz Tone is not distinctive.

C. Motorola's Assertion That It Has Provided Uncontroverted Evidence That its Sound Mark is Distinctive and In Use By Motorola is Unfounded and Wrong.

1. Motorola's Own Statement of Facts Directly Supports Nextel's Case.

Motorola's Statement of Facts, recited on pages 2-4 of its Memorandum, directly supports Nextel's case. Motorola's and Nextel's respective statements of fact include the following facts regarding "use" of the 911 Hz Tone:

MOTOROLA	NEXTEL
The sound is heard when a channel is available for a two-way radio user to communicate with another two-way radio user. Mem. at 2 (citing Ex. 2, Klein Dep. at pp. 28, 44-45, 102-103).	The 911 Hz Tone signifies that "either the channel[']s available for communication or that the microphone is active and transmitting." Ex. 1, Nextel SJM at ¶ 11 (citing Ex. 4, Klein Depo. Excerpt, at 44-45).
Typical users of Motorola's two-way radios include personnel in public safety (e.g., fire, police, and emergency medical technicians), critical infrastructure sectors (e.g., utility companies), and federal government groups (e.g., Dept. of Defense, Dept. of Justice). Mem. at 2-3 (citing Ex. 2, Klein Dep. at pp. 89-90, 123, 129-132).	The Motorola goods at issue in this matter are two-way radios, which Motorola sells to public safety agencies, such as police, fire and EMT agencies. Ex. 1, Nextel SJM at ¶ 3 (citing Ex. 3, 911 Hz Tone App. File Wrapper).
Motorola trains end users of its radios to recognize the sound as coming from Motorola radios . . . Mem. at 3 (citing Ex. 2, Klein Dep. at pp. 45-46, 109-110, 117-118) ²	Motorola's witness asserted that when the tone is heard by a user, that user would know the product is a Motorola product because the product also is marked with "the Motorola label, the trademarks, the bat wing emblem, things like that." Ex. 1, Nextel SJM at ¶ 14 (citing Ex. 4, Klein Depo. Excerpt at 45-46).

² Motorola's motion also states that the 911 Hz Tone is heard through an "on-line method" that "actually plays the tone." . . . Mem. at 3 (citing Ex. 2, Klein Dep. at pp. 45-46, 109-110, 117-118)). In the referenced deposition pages, Mr. Klein uses these phrases to describe

<p>For example, the sound is described in Motorola's user manuals and user guides. . . Mem. at 3 (citing Ex. 2, Klein Dep. at pp. 45-46, 109-110, 117-118)</p>	<p>User manuals and training materials provided to customers describe the various tones emitted by the two-way radios in a variety of ways, all within the context of explaining the functions and features of the products. The 911 Hz Tone is not identified as such, but the same tone is described variously as "a Group of Medium-Pitched Tones," a high pitched "dih-dih-dit" tone, and/or "3 short, high pitched tones ('<i>di-di-dit</i>')," in user manuals for various 911 Hz Tone Products. Ex. 1, Nextel SJM at ¶ 17 (citing Klein Depo. Excerpt at 62-70; Ex. 7, XTS™ 3000 Astro User Manual, at MOT 002217; Ex 8, MTX-800™ Privacy Plus® User Manual, at MOT 000269; Ex. 9, STX® 800/821 SmartNet™ User Manual, at MOT 000321.)</p>
<p>It is also heard at trade shows where Motorola displays and promotes its two-way radios. . . . Mem. at 3 (citing Ex. 2, Klein Dep. at pp. 45-46, 109-110, 117-118)</p>	<p>Even in marketing contexts such as trade shows, the 911 Hz Tone is heard only in connection with its functional purpose. Motorola's witness explained that:</p> <p style="padding-left: 40px;">The Talk-Permit tone from its inception has always indicated that when you hear this tone, you are being told that either there is a channel available for you now, or that the channel has been – you know, essentially you have the channel. The microphone is active. You can now speak.</p> <p>Ex. 1, Nextel SJM at ¶ 15 (citing Ex. 4, Klein Depo. Excerpt, at 103). When asked "are there times . . . when the tone is heard and that's not the case?," the witness replied "No. The tone is specific to – the</p>

interactive training. Motorola produced an interactive training module on a CD, which played the tone. As discussed above, however, it demonstrates the tone specifically and exclusively to denote the activation of the "Talk-Permit" or "Call-Back" feature of the product. *See* Ex. 1, Nextel SJM, at Ex. 4, Klein Depo. Excerpt, at 110-11.

	<p>sound is specific to those events.” <i>Id.</i> at 103-04 (emphasis added). Motorola does not feature or use the 911 Hz Tone in any other way:</p> <p>Q. Now, at any of those trade shows, are you aware of any instance in which Motorola featured the 911 Hz Tone other than in connection with operation of the function that it signifies?</p> <p>A. I’m not aware of any other – any other presentation of that tone.</p> <p><i>Id.</i> at 123.</p>
In addition, Motorola’s two-way radios that emit the sound are prominently marked with the MOTOROLA word mark and design marks. . . . Mem. at 3 (citing Ex. 2, Klein Dep. at pp. 45-46, 109-110, 117-118)	Motorola’s witness asserted that when the tone is heard by a user, that user would know the product is a Motorola product because the product also is marked with “the Motorola label, the trademarks, the bat wing emblem, things like that.” Ex. 1, Nextel SJM at ¶ 14 (citing Ex. 4, Klein Depo. Excerpt at 45-46).
Motorola ensures the consistency of its sound among its two-way radios by, for example, having requirements for the particular pitch and cadence and conducting verification testing of products. Mem. at 4 (citing Ex. 2, Klein Dep. at pp. 13-14, 28)	The 911 Hz Tone and the other tones emitted by Motorola’s two-way radios have been kept consistent over successive generations of two-way radio products because the consistency makes it possible for users (public safety, police and fire officials) to recognize the activation of the same operational feature without being retrained. Ex. 1, Nextel SJM at ¶ 12 (citing Ex. 4, Klein Depo. Excerpt, at 42-43). As Motorola’s 30(b)(6) witness explained, using the same tone to signify the same feature in different products “allows [customers] to understand what’s happening without them interacting.” <i>Id.</i> at Ex. 4, Klein Depo. Excerpt at 43. This permits what Motorola refers to internally as “Hands on, eyes off” operation of the products by users. <i>Id.</i> at 42.

Cf. Mem. at 2-4 *with* Ex. 1, Nextel SJM, at 2-9. Motorola's own statement of facts cites examples of "use" of the 911 Hz Tone that solely and exclusively denote the operation of a particular function of the radios. Contrary to its ultimate assertion, Motorola has adduced absolutely no evidence that the 911 Hz Tone has been used in a trademark sense.

Motorola's statement of facts directly supports and is consistent with Nextel's statement of facts in its own summary judgment motion. The facts are undisputed. The issue is ripe for summary judgment and Nextel has met its burden of proof.

2. The 911 Hz Tone Has Not Been Used as a Mark, is Not Distinctive, and Does Not Qualify For Trademark Protection.

Motorola's summary judgment motion asserts that the uncontroverted evidence establishes that it has used the 911 Hz Tone as a mark and that that mark is distinctive. Mem. at 13-16. But all of the asserted uses of the 911 Hz Tone, *see id.* at 15, are among those operational uses that have already been demonstrated by Nextel not to constitute use in a trademark sense. *See* Ex. 1, Nextel SJM, at pp. 4-8, 14-16.

With respect to distinctiveness, Motorola asserts that it demonstrated and played the 911 Hz Tone for years, and had annual budgets of hundreds of thousands of dollars related to advertising its products and participating in trade shows. Mem. at 15. But where none of those activities and none of the advertising or trade show expenditures actually involved the use of the 911 Hz Tone as a mark, that evidence is irrelevant to whether the 911 Hz Tone has acquired distinctiveness as an indicator of the source of the products being sold.

Motorola also produced a flawed survey conducted by Dr. Michael Rappeport. *See* Mem. at 15-16. Despite the fact that Nextel had deposed Dr. Rappeport only two days before Motorola filed its summary judgment motion, Motorola fails to make any mention of that deposition, and

instead claims that its survey is “uncontradicted.” Mem. at 16. Nextel, however, challenged the conclusions Motorola seeks to draw from Dr. Rappeport’s survey on grounds that are fully set out in Nextel’s own summary judgment motion. See Ex. 1, Nextel SJM, at ¶¶ 20-23; pp. 17-20.

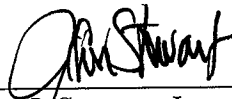
Moreover, Motorola’s assertion that the survey’s supposed results – that a reported 42% of respondents “recognized Motorola’s sound as coming from a single source” – are sufficient to establish acquired distinctiveness is wrong as a matter of both fact and law. First, the survey was structured not to measure whether the sound was associated with a single source but to measure whether a product that had been named in a preliminary question was associated with a single source. See Ex. 1, Nextel SJM, at pp. 8-9, 18-19. Second, Motorola’s purported 42% result actually comprised a mere 14% who identified Motorola, combined with more than twice as many – 29% – who named Nextel. *Id.* at p. 9. Nextel set forth in its own summary judgment motion the case law holding that combining such results to reach an aggregate percentage is inappropriate in addressing this type of question and that 42% is too low a result in any event. *Id.* at p. 19 fn. 8. Motorola’s citation in its Memorandum of *Textron, Inc. v. Int’l Trade Comm’n*, 224 U.S.P.Q. 625, 628 (Fed Cir. 1985), for the proposition that 40% and 37% survey results were sufficient to establish acquired distinctiveness, see Mem. at 16, is misleading and wrong. *Textron* itself found acquired distinctiveness based on a survey result of 61%. *Id.* But both it and one of the cases it cited, *Ideal Toy Corp. v. Plawner Toy Mfg. Corp.*, 216 U.S.P.Q. 102, 106 (3rd Cir. 1982), involved surveys in which respondents were shown a “knock-off” product and were asked to identify its source, and 61% and 40%, respectively, identified it as an original. The other case cited by *Textron*, *Monsieur Henri Wines, Ltd. v. Duran*, 204 U.S.P.Q. 601, 605 (TTAB 1979), involved a survey in which 37% of the respondents correctly identified a brand of wine based only on viewing isolated graphic elements of its label, compared with only

0.1% to 2.8% who correctly identified the source of the other labels. None of these cases supports a conclusion of acquired distinctiveness here, where only 14% of respondents named a two-way radio when they heard the genuine 911 Hz Tone and then reported that they associated that radio with Motorola.

III. Conclusion

For the reasons stated herein, Nextel respectfully requests that the Board find that Applicant's Motion be DENIED.

Respectfully,



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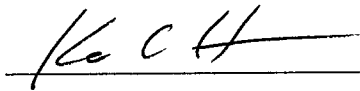
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CERTIFICATE OF SERVICE

I hereby certify that a true copy of OPPOSER'S OPPOSITION TO APPLICANT'S MOTION FOR SUMMARY JUDGMENT was served on counsel for Motorola on the 16th day of December, 2005, by e-mail (without exhibits), and by first class mail (with exhibits), to:

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EXHIBIT 1

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**OPPOSER'S MOTION FOR SUMMARY JUDGMENT
AND FOR SUSPENSION OF PROCEEDINGS**

November 11, 2005

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2	Answer
3	911 Hz Tone Application File Wrapper
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**OPPOSER'S MOTION FOR SUMMARY JUDGMENT
AND FOR SUSPENSION OF PROCEEDINGS**

“Wishing does not make a trademark or service mark be.”¹ Applicant Motorola, Inc. (“Motorola”) has failed to satisfy the most fundamental requirement for obtaining a trademark registration, as it has never used the sound that is the subject of this application as a trademark. Opposer Nextel Communications, Inc. (“Sprint Nextel”),² pursuant to Fed. R. Civ. P. 56(c), respectfully requests a summary judgment that Motorola has not established trademark rights in the subject matter of its underlying application and that the application be dismissed. Sprint Nextel further requests that the Board (1) reject Motorola’s unfounded affirmative defense of laches and/or acquiescence and (2) suspend the proceedings in accordance with Trademark Rule 2.127(d) and TBMP § 528.03.

I. Introduction

The world is full of equipment and machines that make meaningful sounds. Car horns honk, answering machines beep, and doorbells ring. By and large, however, car manufacturers have not sought to establish trademark rights in their horns, answering machine companies do not assert trademarks on their beeps, and doorbell manufacturers do not claim exclusive trademark rights in “ding dong.”

Two-way radios – those made by Motorola as well as radios made by others – all have “alert” tones that tell the user when certain operational features have been activated. The user hears the signal and knows the particular radio function is working. Virtually every radio

¹ *In re Morganroth*, 208 U.S.P.Q. (BNA) 284, 287 (TTAB 1980).

² Nextel Communications, Inc. merged with Sprint Corporation on August 12, 2005, and the new entity is known as Sprint Nextel Corporation. We will refer to Opposer as “Sprint Nextel.” A motion for joinder or to substitute parties will be filed as appropriate.

manufactured by any manufacturer relies on such audible tones and signals in its operation.

Motorola began manufacturing radios of the type at issue in this proceeding, capable of emitting a wide variety of alert signals, in 1983 or 1984. Over the intervening years, Motorola did not claim trademark rights in those various signals.

On April 9, 2003, however, Motorola filed this application, seeking to register an electronic tone played at a certain cadence at a frequency of 911 Hz.³ In its application, Motorola alleges that it has used this tone in commerce since 1991. However, and as set forth in more detail below, Motorola has not adduced a single piece of evidence sufficient to support its allegation as a matter of law. The facts are beyond dispute: Motorola has never used the 911 Hz Tone as a trademark. In the absence of any evidence of use, the 911 Hz Tone is not entitled to registration.

As a separate matter, Motorola's sole affirmative defense is an unsustainable argument that Sprint Nextel's opposition is barred due to laches and/or estoppel by acquiescence. This affirmative defense also fails as a matter of law.

II. Undisputed Facts

A. Relationship Between the Parties

1. Sprint Nextel is one of the largest providers of cellular telephone services in the United States. *See* Ex. 1, Notice of Opposition, at ¶ 1; Ex. 2, Answer at ¶ 1.

2. Motorola and Sprint Nextel's predecessor entity, Nextel Communications, Inc., have a long-standing business relationship, pursuant to which Motorola manufactures wireless

³ Essentially simultaneously, Motorola filed a second application, seeking registration of a separate tone that is used by Sprint Nextel in advertising its own telecommunications and wireless walkie-talkie services, and which is the subject of a separate opposition proceeding, Opp. No. 91/164,353.

phones with walkie-talkie capabilities that are sold to Sprint Nextel for resale to Sprint Nextel's cellular service customers. *See* Ex. 1, Notice of Opposition, at ¶ 2; Ex. 2, Answer, at ¶ 2.

3. The Motorola goods at issue in this matter are two-way radios, which Motorola sells to public safety agencies, such as police, fire and EMT agencies. *See* Ex. 3, 911 Hz Tone App. File Wrapper. The Motorola two-way radios are branded with the "Motorola" name and Motorola's "batwing" mark. *See* Ex. 4, Klein Depo. Excerpt, at 45-46. Sprint Nextel's walkie-talkie phones are also marketed to and sold to public safety agencies. *See* Ex. 5, Sprint Nextel Website Printout. Sprint Nextel's walkie-talkie phones compete directly with Motorola's two-way radios in that market. *See* Ex. 5, Sprint Nextel Website Printout.

B. Procedural History

4. On April 9, 2003, Motorola filed an application for registration of an electronic sound consisting of a tone at 911 Hz played at a cadence of 25 milliseconds (ms) on, 25 ms off, 25 ms on, 25 ms off, 50 ms on (the "911 Hz Tone") in connection with "[t]wo-way radios" (the "911 Hz Tone Application"). Ex. 3, 911 Hz Tone App. File Wrapper.

5. The 911 Hz Tone Application was filed under Section 1(a) of the Lanham Act and claimed May 6, 1991, as the date of first use and the date of first use in commerce. *See* Ex. 3, 911 Hz Tone App. File Wrapper.

6. On October 17, 2003, Motorola submitted a response to an Office Action requiring a specimen evidencing use of the 911 Hz Tone in commerce. Motorola's response provided a specimen of use in the form of a compact disc that Motorola described as "[a] sound file that contains a sound that emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak." Ex. 3, 911 Hz Tone App. File Wrapper.

C. Motorola's Alleged "Use" of the 911 Hz Tone

7. In response to Sprint Nextel's Interrogatory No. 6, which requested Motorola to describe in detail the manner in which it purports to use or to have used the 911 Hz Tone in commerce, Motorola stated as follows:

Applicant has used the 911 Hz Tone in commerce by, among other things, offering to sell and selling two-way radios and cellular telephones that contain the chip referred to above (*see* Response to No. 5) and from which the [911 Hz] Tone can be heard.

Ex. 6, Motorola's Responses to Sprint Nextel's First Set of Interrogatories ("Motorola Interrog. Resp."), at No. 6. Motorola's response to Interrogatory No. 5, which had asked for a detailed description of the way in which the 911 Hz Tone was affixed to any goods, was that the 911 Hz Tone was affixed "through an electronic chip resident in the device and from which the sound originates and emanates." Ex. 6, Motorola Interrog. Resp., at No. 5.

8. The 911 Hz Tone was created by Motorola engineers when the radios were first developed in 1983 or 1984, and the parameters of its cadence and frequency were predetermined by the interval at which the radios' communications protocol permitted pulses and the frequency on which their single frequency generator operated. *See* Ex. 4, Klein Depo. Excerpt, at 58-60. The 911 Hz Tone, like the numerous other signal tones emitted by the Motorola radios, was formed simply by using integral multiples of the given cadence and frequency. *See id.*

9. Radios manufactured by other companies also emit various sound signals, *see id.* at 92, but for the first twenty years it manufactured its two-way radios, Motorola had never undertaken any investigation to determine whether other radios use the same 911 Hz Tone. *See id.* at 92-94.⁴

⁴ In August 2005, Motorola hired an expert witness, Dr. Michael Rappeport, to conduct a survey and prepare a report regarding the tone, a copy of which is attached as Exhibit 5. Among the

10. The 911 Hz Tone, like other two-way radio signal tones, serves a specific function. That function is to signify the activation of one of the operations of the radios in which the tone-generating chip is embedded. As stated by Motorola in its description of the specimen it provided in response to the Office Action regarding its application, the 911 Hz Tone “emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak.” Ex. 3, 911 Hz Tone App. File Wrapper.

11. Motorola’s Rule 30(b)(6) witness confirmed that the 911 Hz Tone signifies that “either the channel[’]s available for communication or that the microphone is active and transmitting.” Ex. 4, Klein Depo. Excerpt, at 44-45. The tone notifies the user of the activation of what is referred to as the “Talk-Permit” or “Call-Back” function of the device. *See id.* at 49-50. The 911 Hz Tone is one of a dozen or more different audible tones emanating from the two-way radios, each signifying the activation of a different operation or feature of the radio. *See id.* at 50, 62-63; *see, e.g.*, Ex. 7, XTST[™] 300 Astro User Manual, at MOT 002215-2217; Ex. 8, MTX-800[™] Privacy Plus[®] User Manual, at MOT 000269; Ex 9, STX[®] 800/821 SmartNet[™] User Manual, at MOT 000321-322.

12. The 911 Hz Tone and the other tones emitted by Motorola’s two-way radios have been kept consistent over successive generations of two-way radio products because the consistency makes it possible for users (public safety, police and fire officials) to recognize the activation of the same operational feature without being retrained. *See* Ex. 4, Klein Depo. Excerpt, at 42-43. As Motorola’s 30(b)(6) witness explained, using the same tone to signify the same feature in different products “allows [customers] to understand what’s happening without

responses were a number that identified the tone as coming from a two-way radio, but identified the radio as manufactured by a company or companies other than Motorola. *See* Ex. 11, Rapoport Survey Report, at MOT 004685-86.

them interacting.” *Id.* at 43. This permits what Motorola refers to internally as “Hands on, eyes off” operation of the products by users. *Id.* at 42.

13. Other two-way radios, manufactured by Motorola’s competitors such as Macom and Kenwood, also emit a number of different tones to denote the operation of different features. *See id.* at 93-95. Motorola’s 30(b)(6) witness, when asked whether competitors’ products also emitted a “Talk-Permit” or “Call-Back” tone, stated that “[i]t would be my assumption that those products would require some type of indication to notify the user that . . . either the channel is available or the mike is active.” Ex. 4, Klein Depo. Excerpt, at 92 (emphasis added).

14. Motorola’s witness asserted that when the tone is heard by a user, that user would know the product is a Motorola product because the product also is marked with “the Motorola label, the trademarks, the bat wing emblem, things like that.” *Id.* at 45-46. But he also testified that at least one other company, a product integrator, sells Motorola-manufactured radios that emit the 911 Hz Tone, and those radios feature the brands of the other company. *Id.* at 47-48.

15. Even in marketing contexts such as trade shows, the 911 Hz Tone is heard only in connection with its functional purpose. Motorola’s witness explained that:

The Talk-Permit tone from its inception has always indicated that when you hear this tone, you are being told that either there is a channel available for you now, or that the channel has been – you know, essentially you have the channel. The microphone is active. You can now speak.

Id. at 103. When asked “are there times . . . when the tone is heard and that’s not the case?,” the witness replied “No. The tone is specific to – the sound is specific to those events.” *Id.* at 103-04 (emphasis added). Motorola does not feature or use the 911 Hz Tone in any other way:

Q. Now, at any of those trade shows, are you aware of any instance in which Motorola featured the 911 Hz Tone other than in connection with operation of the function that it signifies?

A. I'm not aware of any other – any other presentation of that tone.

Id. at 123.

16. Motorola's witness reconfirmed this point in testifying about other situations in which the 911 Hz Tone might be heard, in the context of a demonstration by a sales representative at a customer's facility, as follows:

Q. And in that context as well, is it the case that when you hear the tone, it's because the channel open function is working?

A. Again, the tone has always been in reference to either the call-back availability or of the microphone active and communications occurring.

Id. at 104-05 (emphasis added).

17. Motorola does not run any audiovisual advertising for 911 Hz Tone Products in which the 911 Hz Tone is heard. *Id.* at 117. Motorola's 30(b)(6) witness was unaware of any print advertising that specifically identifies the 911 Hz Tone. *Id.* at 107-08. User manuals and training materials provided to customers describe the various tones emitted by the two-way radios in a variety of ways, all within the context of explaining the functions and features of the products. The 911 Hz Tone is not identified as such, but the same tone is described variously as "a Group of Medium-Pitched Tones," a high pitched "dih-dih-dit" tone, and/or "3 short, high pitched tones ('*di-di-dit*')," in user manuals for various 911 Hz Tone Products. *Id.* at 62-70; Ex. 7, XTS™ 3000 Astro User Manual, at MOT 002217; Ex. 8, MTX-800™ Privacy Plus® User Manual, at MOT 000269; Ex. 9, STX® 800/821 SmartNet™ User Manual, at MOT 000321.

18. In all, Motorola identified a total of five circumstances in which a potential customer might actually hear the 911 Hz Tone: (i) when being trained in the use of the product, (ii) when attending a trade show, (iii) when viewing a sales representative's demonstration, (iv) when using the product after purchase, or (v) when hearing someone else using the product. *See*

Ex. 4, Klein Depo. Excerpt, at 45, 117-120. In each of those circumstances, as Motorola's witness confirmed, the 911 Hz Tone specifically and exclusively denotes the activation of the "Talk-Permit" or "Call-Back" feature of the product. *Id.* at 110 (training); 103-04, 123 (trade shows); 104-05 (sales demo); 42-43 (use of product); 119 (others' use in the field).

19. Motorola admitted in April 2005 that it had conducted no surveys regarding the 911 Hz Tone or any products that feature the 911 Hz Tone. *See* Ex. 10, Motorola's Response to Sprint Nextel's First Request for Documents and Things ("Motorola Resp. to Doc. Req."), at Nos. 4, 5.

20. On September 14, 2005, after the close of discovery in this proceeding, Dr. Rappeport completed, on behalf of Motorola, a "Study of the 'Chirp' Sound" (the "Study") that purported to survey whether the 911 Hz Tone "has in fact acquired source indicating distinctiveness." Ex. 11, Rappeport Survey Report, at MOT 004677.

21. The Study involves administration of live interviews with 180 employees or volunteers at police stations and fire departments, in which the interviewee was played several sounds, including the 911 Hz Tone, on a CD or cassette tape player, and then was asked a series of questions. *See id.* at MOT 004681-83.

22. Immediately after the interviewee heard each sound played, he or she was asked the following questions:

1. If you happen to know what this sound is, please tell me what it is and what, if anything, you know about it. Please be as specific as possible. If you don't happen to know what the sound is, it is okay to say so. [RECORD VERBATIM RESPONSE.] Is there anything else?

2. [IF THE RESPONDENT IDENTIFIES THE SOUND, BUT DOES NOT MENTION A SPECIFIC COMPANY IN HIS OR HER ANSWER, ASK:] You said that the sound comes from a [ANSWER FROM ABOVE]. Are you thinking of one company

who makes that [ANSWER] or more than one company who makes that [ANSWER]?

Id. at MOT 004681, 004690-93.

23. Dr. Rappeport reported that, after discarding 16 interviews collected by one interviewer that could not be validated, leaving 164 interviews, the following percentages of respondents identified the following companies in the aggregate in response to either Question 1 or Question 2 :

Motorola Only	14%
Nextel Only	29%
Motorola and Nextel	9%

Id. at 004685. After further eliminating responses he considered to reflect "guessing," he reported that the following percentages had both identified the respective companies and also identified a radio or walkie-talkie as the device with which the sound was associated:

Motorola Only	11%
Nextel Only	24%
Motorola and Nextel	7%

Id. at 004686.

24. Motorola admitted that it has never licensed the 911 Hz Tone to anyone. *See* Ex. 6, Motorola Interrog. Resp., at Nos. 17, 20.

25. Motorola admitted that it does not police third-party uses of the 911 Hz Tone, nor has it attempted to enforce any rights in the 911 Hz Tone against any third party. *See* Ex. 10, Motorola Resp. to Doc. Req., at No. 6.

26. Motorola admitted that it is not aware of any current or prior third-party use of the 911 Hz Tone. *See* Ex. 6, Motorola Interrog. Resp., at No. 17.

III. Argument

A mere operational feature of a product cannot be entitled to trademark protection, unless it is also used as, and functions as, a mark. *See* 15 U.S.C. §§ 1052, 1127. Here, the asserted mark is simply an operational signal tone emitted by a two-way radio. The 911 Hz Tone has not been used as a mark, and, therefore, the most fundamental prerequisite for registration cannot be met.

Unlike a visual mark or label affixed to a product, which can create a lasting impression that serves to identify the product's source, sounds that merely indicate the operation of a product's various features cannot, without more, serve as a mark. Automobile manufacturers program recognizably different tones into their products, such as a "fasten seatbelt" chime and a "blinker on" sound. An elevator may "ding" when the door is ready to open and "beep" as it passes each floor. But the sounds function as signals, not as trademarks. Unless the manufacturer takes steps to create a separate commercial impression for one of those sounds, by which it becomes associated with the product's source rather than just with the operation of the particular function it denotes, the sound itself cannot be found to have been used as a mark.

In this case, it is indisputable that the 911 Hz Tone has not been used as a mark.

A. **As Used by Motorola, the 911 Hz Tone Does Not Function As a Trademark**

1. **A Trademark Must Identify and Distinguish the Source of the Goods**

The Lanham Act defines a trademark as

any word, name, symbol, or device . . . (1) used by a person . . . to identify and distinguish his or her goods . . . from those manufactured or sold by others and to indicate the source of the goods

show use of the designation ‘Aaa’ as a mark identifying applicant’s service.” *Id.* at 2048. The Board affirmed, holding that:

[I]t appears to us that applicant’s various rating symbols, including the designation “Aaa,” are used in the specimens of record to identify and distinguish not applicant’s rating services, but rather the ratings themselves, and that they would be so perceived by the public. That is, the significance of the symbols, as they are used in the specimens, is that of rating symbols (i.e., indications of applicant’s opinion of the investment quality of debt instruments), not service marks. While it is not inconceivable that a particular designation could be used, and therefore function, both as a rating symbol and as a trademark or service mark, applicant’s designation “Aaa” is not so used in the specimens of record.

Id. at 2048-49. As in *Morganroth*, the fact that a designation could be used as a mark was insufficient to support its registration where the applicant had not proved that it was used as a mark.

Whether a designation for which registration is being sought has actually been used as a mark is to be determined in the first instance by examining the specimens of record in the application. *Id.* at 2047 (citing *In re Bose Corp.*, 546 F.2d 893, [192 U.S.P.Q. (BNA) 213] (CCPA 1976), and *In re Scientific Methods, Inc.*, 201 U.S.P.Q. (BNA) 917 (TTAB 1979)). Unless the specimen, or other evidence adduced in support of an application, shows that the applicant has used a “‘constant pattern’ or design to highlight” the particular word, symbol, or device sought to be registered in contrast with other such designations used in connection with the good or service, the particular designation cannot be found to have been used as a trademark. *MicroStrategy Inc. v. Motorola, Inc.*, 245 F.3d 335, 342 (4th Cir. 2001) (emphasis added). The Board refused registration, for example, for a background design that always appeared in conjunction with a company’s registered marks, where there was no evidence that the applicant had “called attention” to the design per se “or otherwise ha[d] promoted this background design

in a way that would set the design apart” from the marks with which it appeared. *In re Benetton Group S.p.A.*, 48 U.S.P.Q.2d (BNA) 1214, 1216-17 (TTAB 1998). Where an applicant promotes an aspect of its product “simply as one more feature of its [goods]” rather than as an indication of origin, registration is not permissible. *In re Upper Deck Co.*, 59 U.S.P.Q.2d (BNA) 1688, 1692-93 (TTAB 2001).

As the Board has stated, “[i]t is settled that when a designation or slogan imparts an impression of conveying advertising or promotional information rather than of distinguishing or identifying the source of goods or services, it cannot be the basis for registration.” *In re Niagara Frontier Services, Inc.*, 221 U.S.P.Q. (BNA) 284, 285-86 (TTAB 1983). When, as here, the asserted mark does not even impart promotional information, but, as both Motorola’s evidence and its specimen make clear, the asserted mark is used instead only to convey information about the functional status of a particular operational feature of the product, registration cannot be issued.

2. Mere Emanation of the 911 Hz Tone from Motorola’s Two-Way Radios During Operation Does Not Constitute Use as a Trademark

In order to be registered, the 911 Hz Tone must be shown to have been used by Motorola (1) to identify and distinguish its goods from those of others, not merely to distinguish different features of its own product, and (2) to indicate the source of those goods. The undisputed facts demonstrate that Motorola has failed to meet this most fundamental statutory prerequisite. The 911 Hz Tone is used to provide information to the user regarding the operation of the goods, not as a trademark. The 911 Hz Tone is one of more than a dozen electronically generated tones that Motorola’s engineers programmed into the radios to distinguish and differentiate among their different operational functions. Exhibit 12, which is an excerpt from a 52-page User Manual for one of Motorola’s 911 Hz Tone Products, vividly depicts the number and respective meanings of

the many tones emanating from the goods.⁶ Motorola cannot now, more than 20 years after first manufacturing the product, arbitrarily choose one of those tones and claim it as a trademark. As the Board noted in *Morganroth*, the trademark use requirement

clearly does not contemplate that the public will be required or expected to browse through a group of words, or scan an entire page in order to decide that a particular word, separated from its context, may or may not be intended, or may or may not serve to identify the product . . . [A trademark] must be used in such a manner that its nature and function are readily apparent and recognizable without extended analysis. . .

208 U.S.P.Q. (BNA) at 288, *quoting National Geographic Society*, 83 U.S.P.Q. (BNA) 260, 260-61 (Comr. 1941); *see also In re Whataburger Sys., Inc.*, 209 U.S.P.Q. (BNA) 429, 430 (TTAB 1980) (designation may not be registered unless it is used “in such a manner that its function as an indication of origin may be readily perceived by persons encountering the goods or services in connection with which it is used”).

None of the tones emitted by Motorola’s two-way radios, including the 911 Hz Tone, meets this fundamental standard. Like the multiple ratings designations in *Moody’s* and the multiple phrases and pictures in the advertising in *Morganroth*, none of the Motorola tones functions individually as an indication of origin that may be readily perceived as such by the person encountering it. On the contrary, the Motorola tones function in a way similar to tones

⁶ The descriptions of the 911 Hz Tone in manuals and training materials cannot themselves constitute use as a trademark sufficient to meet the statutory prerequisite. First, use of a sound mark cannot be established by evidence of non-aural references. *See Ride the Ducks, LLC v. Duck Boat Tours, Inc.*, 75 U.S.P.Q.2d (BNA) 1269, 1276 (E.D. Pa. 2005). But even if printed descriptions were able to substitute for use of the actual sound, Motorola’s vague and inconsistent characterizations of the Call-Back tone, included within extensive lists of other operationally functional tones and buried in extensive manuals, *see, e.g.*, paragraph 17 above citing Ex. 7 at MOT 002217, Ex. 8 at MOT 000269, and Ex. 9 at MOT 000321, could not be understood by users or purchasers of the two-way radios as trademarks indicating the source of the products. *See Morganroth, National Geographic, and Whataburger* cases cited *infra* in text.

encountered in everyday life, which indicate the status of a device or the occurrence of a particular event. When a user encounters Motorola's "Talk Permit" tone – the 911 Hz Tone – while operating the two-way radio, he or she knows nothing more than that the line is open, just as the device's "Dispatch Busy" tone tells him or her that the line is busy. *See* Ex. 9 at MOT 000321.

Motorola's description of the specimen it submitted in support of its application could not be more clear as to how the 911 Hz Tone is used, stating that it "emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak." Ex. 1, Notice of Opposition, at ¶ 8; Ex. 2, Answer, at ¶ 8 (emphasis added). And the undisputed evidence fully confirms that characterization, establishing that in every one of the circumstances in which a user or potential purchaser of Motorola's two-way radios hears the 911 Hz Tone, it is as a signal that specifically and exclusively denotes the activation of the "Talk-Permit" or "Call-Back" feature of the product. *See* Ex. 4, Klein Depo. Excerpt, at 42-43, 103-05, 110, 119, 123.

As a general matter, consumers expect two-way radios (and other aural communications devices) to make audible tones that correlate to various operations of the products, and do not consider those sounds to act as source identifiers. Indeed, Motorola maintained the 911 Hz Tone across successive generations of two-way radio products precisely because the tone had operational significance, and consistency avoided the need to retrain users. Klein Depo. at 103-104. Motorola's witness acknowledged that other two-way radio manufacturers must also provide signal tones that serve the same purpose in their products. *See id.* at 92, 94-95.

For the 911 Hz Tone specifically, Motorola's witness repeatedly confirmed that users encounter it only as an operational indication of the availability of the Talk-Permit or Call-Back

function. Motorola admitted that at trade shows, no use is made of the 911 Hz Tone other than in connection with operation of the function that it signifies:

Q: Now, at any of those trade shows, are you aware of any instance in which Motorola featured the 911 Hz Tone other than in connection with the operation of the function that it signifies?

A: I'm not aware of any other – any other presentation of that tone.

Id. at 123. The same point was reconfirmed with respect to use of the tone in product demonstrations by Motorola sales representatives:

Q. And in that context as well, is it the case that when you hear the tone, it's because the channel open function is working?

A. Again, the tone has always been in reference to either the call-back availability or of the microphone active and communications occurring.

Id. at 104-05 (emphasis added).

Accordingly, whenever consumers hear the 911 Hz Tone, they perceive that tone as an indicator of the current status of the two-way radio, and not as an indication of the source of the goods. The 911 Hz Tone is merely one tone plucked from a myriad of tones emitted by Motorola's two-way radios, all used as operational signals. Motorola has never highlighted the 911 Hz Tone in advertising or otherwise used it as a source-identifying mark. Merely embedding a sound chip in the products and demonstrating the tone in its function as an operational signal is legally insufficient to establish trademark use.⁷

⁷ Motorola's 30(b)(6) witness asserted that the 911 Hz Tone serves to indicate source when users hear the tone during use of a two-way radio, but only because the radio displays "the Motorola label, the trademarks, the bat wing emblem, things like that." Ex. 4, Klein Depo. Excerpt, at 45-46. The source identification, in other words, comes from Motorola's actual trademarks, not the tone. See *In re Benetton Group S.p.A.*, 48 U.S.P.Q.2d (BNA) 1214, 1216-17 (TTAB 1998).

B. Any Attempt to Show Distinctiveness of the 911 Hz Tone Would Be Unavailing

The handful of decisions addressing sound marks establish special requirements with respect to the question of distinctiveness. As the Board has observed, “the criteria for the registration of sound marks must be somewhat different” from the criteria for other more conventional types of marks, given the fact that, unlike a visually perceptible trademark applied to goods, an asserted sound mark “depends upon aural perception of the listener which may be as fleeting as the sound itself.” *In re General Elec. Broad. Co., Inc.*, 199 U.S.P.Q. (BNA) 560, 563 (TTAB 1978). Thus, especially for alleged sound marks that “resemble or imitate ‘commonplace’ sounds or those to which listeners have been exposed under different circumstances,” persuasive evidence must be presented to support the acquired distinctiveness of the sound. *Id.*; *see also, e.g., Ride the Ducks*, 75 U.S.P.Q.2d at 1274-76. And for sound marks as well as other kinds of marks, an allegedly distinctive product feature or configuration that merely follows industry practice and meets consumer expectations for such a product, however unique it may otherwise be, will not be found inherently distinctive. *See, e.g., CITC Indus. Inc. v. Levi Strauss & Co.*, 216 U.S.P.Q. (BNA) 512 (TTAB 1982) (batwing mark incorporated in shoe sole design); *Anchor Hocking Glass Corp. v. Corning Glass Works*, 162 U.S.P.Q. (BNA) 288 (TTAB 1969) (stylized floral design on glassware).

Analogously, applicants asserting trademark rights in product configurations or other non-traditional marks that, like the 911 Hz Tone, have denotative significance must demonstrate “that the primary significance of the term in the minds of the consuming public is not the product but the producer.” *Kellogg Co. v. National Biscuit Co.*, 305 U.S. 111, 118 (1938) (emphasis added); *Inwood Lab., Inc. v. Ives Lab., Inc.*, 456 U.S. 844, 851 n.11, 857-58 n. 20 (1982) (pharmaceutical capsule colors, even though arbitrarily selected, served functional purpose).

But even a claim of inherent or acquired distinctiveness cannot overcome the failure of the 911 Hz Tone to function as a mark. Where matter sought to be registered is not registrable because it is not a mark within the meaning of the Trademark Act, a claim that the matter has acquired distinctiveness under §2(f) as applied to the applicant's goods or services does not overcome the refusal. *See, e.g., In re G.D. Searle & Co.*, 360 F.2d 650, 655 [149 U.S.P.Q. (BNA) 619, 624] (CCPA 1966) (“[w]here it appears that registrability of the term is precluded under sections 45 and 2 [because it does not function as a source identifier], inquiry under sections 2(e) and 2(f) is not necessary”); *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 33, [58 U.S.P.Q.2d (BNA) 1001, 1007] (2001) (“[f]unctionality having been established, whether MDI's dual spring design has acquired secondary meaning need not be considered”); *In re Tilcon Warren, Inc.*, 221 U.S.P.Q. (BNA) 86, 88 (TTAB 1984) (“[l]ong use of a slogan which is not a trademark and would not be so perceived does not, of course, transform the slogan into a trademark”). Even an inherently distinctive designation cannot be registered as a trademark unless it is used as one. *See In re Niagara Frontier Serv., Inc.*, 11 U.S.P.Q. (BNA) at 286 (advertising slogan found not merely descriptive, but nonetheless unregistrable because not used as a mark).

Motorola's own survey fails for this very reason. The survey methodology was based on the explicit premise that acquired distinctiveness could be shown by first establishing whether the sound is recognized as indicating a particular event, not a product's source. *See* Ex. 11, Rapoport Survey Report, at MOT 004677. The questionnaire compounded that mistaken premise, by asking respondents who initially identified the 911 Hz Tone, for example, as a signal from a two-way radio, this follow-up question:

“You said that sound comes from a [two-way radio]. Are you thinking of one company who makes that [two-way radio] or more than one company who makes that [two-way radio]?”

Id. at MOT 004681 (emphasis added). In other words, respondents were not being asked whether they associated the 911 Hz Tone with a particular company source, but whether they associated particular products with such a company. In the case of the Motorola products, the latter association could only have resulted, as admitted by Motorola, through the application of Motorola’s registered trademarks and labels affixed to the two-way radios. *See* Ex. 4, Klein Depo. Excerpt, at 45-46; *see, e.g.*, Ex. 7, at MOT 002212 (graphical representation of portable radio). At most, the survey collected information about some users’ recognition of the fact that Motorola-branded radios were made by Motorola.

Thus, the survey responses could in no way properly be read as evidence of acquired distinctiveness of the 911 Hz Tone.⁸ In fact, on the contrary, the survey design effectively concedes the central reason for dismissing Motorola’s application as a matter of law: that the

⁸ Indeed, even if the survey had been properly designed and implemented, the results – only 11% identified the product and Motorola as its single source – could not support a finding of acquired distinctiveness. *See, e.g., I.P. Lund Trading ApS v. Kohler Co.*, 118 F.Supp.2d 92, 107, [56 U.S.P.Q.2d (BNA) 1776, 1789] (D. Mass. 2000) (50% or higher typically considered sufficient). Although the Study purports to lump these disappointing results for Motorola together with much higher percentages for Nextel to arrive at a 42% aggregate figure, Ex. 11, Rapoport Survey Report, at MOT 004686, that approach is impermissible in this context. In *Lund*, a survey also conducted by Dr. Rapoport was rejected on the basis that it inappropriately lumped single-source responses together to get to 62%. The court noted that only 33% of the respondents associated the alleged mark with the correct source, while the remaining respondents identified its competitor or another manufacturer. *Lund* at 1789. “There can be no secondary meaning if the majority of consumers surveyed – and knowledgeable ones at that – believed the [product at issue] came from a single source, but when asked, it became clear that the vast majority of consumers did not associate the design with [applicant].” *Id.*; *see also, e.g., Zippo Mfg. Co. v. Rogers Imports, Inc.*, 216 F. Supp. 670, 689, [137 U.S.P.Q. (BNA) 413, 428] (S.D.N.Y. 1963) (25% insufficient to establish secondary meaning, particularly in light of fact that 24.1% incorrectly identified a different well-known company as the product’s source); *Carroll Shelby Licensing, Inc. v. Superperformance Int’l, Inc.*, 251 F. Supp.2d 983, 987 (D. Mass 2002) (survey was “completely unreliable” because of the expert’s “conclusory grouping of responses”).

911 Hz Tone was used to denote an operational “event” or function of the product, and not as a trademark identifying the source of the product.

IV. Motorola’s Affirmative Defense Is Insufficient as a Matter of Law

Motorola asserted the affirmative defense of acquiescence and/or laches in its Answer to the Notice of Opposition. This defense fails as a matter of law.

In *Nat’l Cable Television Ass’n Inc. v. American Cinema Editors Inc.*, 937 F.2d 1572, 1581 [19 U.S.P.Q.2d (BNA)1424, 1432] (Fed. Cir. 1991), the Federal Circuit held that a defense of laches is unavailable as a matter of law in an opposition proceeding, as any laches period with respect to registration can only begin to run upon publication of the application, not upon purported knowledge of use of the mark. Motorola’s mark was published for opposition on February 24, 2004. Sprint Nextel timely filed its opposition on August 23, 2004, after obtaining appropriate extensions of time to oppose. Motorola’s laches defense should be dismissed as a matter of law under the *NCTA* ruling.


Furthermore, “[a]cquiescence and estoppel require some affirmative act by opposer which led applicant to reasonably believe that opposer would not oppose applicant’s registration of its mark.” *DAK Indus., Inc., v. Daiichi Kosho Co., Ltd.*, 25 U.S.P.Q.2d (BNA) 1622, 1625 (TTAB 1993). Motorola has identified no evidence of such an affirmative act by Sprint Nextel, because there is none. Especially in view of the fact that Motorola never used the 911 Hz Tone as a mark, there could have been no basis for Sprint Nextel to imagine that Motorola would seek registration until it ultimately did so, twelve years after its first alleged use. Motorola could not have had any reasonable basis for a belief that Sprint Nextel would not oppose such a registration. Sprint Nextel has carried its burden under Rule 56, *see Celotex Corp. v. Catrett*, 477 U.S. 317, 325 (1986); *Kellogg Co. v. Pack’em Enterprises, Inc.*, 951 F.2d 330, [21

U.S.P.Q.2d (BNA) 1142] (Fed. Cir. 1991), and Motorola's acquiescence defense should also be stricken.

V. CONCLUSIONS

For the reasons stated herein, Sprint Nextel respectfully requests that the Board find that the 911 Hz Tone is not entitled to a trademark registration and that Motorola's asserted affirmative defenses of acquiescence and/or laches are insufficient as a matter of law. Therefore, Sprint Nextel respectfully requests that its Motion for Summary Judgment be GRANTED, that Application No. 78/235,618 be refused registration, and that the instant Opposition be sustained.

Respectfully,



November 11, 2005

John F. Stewart, Jr.
Michael H. Jacobs
Karen C. Hermann
William J. Sauers
Attorneys for Sprint Nextel

CROWELL & MORING LLP
1001 Pennsylvania Avenue, N.W.
Washington, DC 20004
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-5116

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 2.198, I hereby certify that a true copy of OPPOSER'S MOTION FOR SUMMARY JUDGMENT was served on counsel for Motorola on the 11th day of November, 2005, by e-mail (without exhibits), and by sending the exhibits to the same on the 12th day of November, 2005, by United States Postal Service Express Mail, to:

John T. Gabrielides
BRINKS, HOFER, GILSON & LIONE
455 North Cityfront Plaza Drive
NBC Tower, Suite 3600
Chicago, Illinois 60611-5599


Michael H. Jacobs

Opposer's Exhibit 1

ESTTA Tracking number: **ESTTA13805**

Filing date: **08/23/2004**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Notice of Opposition

Notice is hereby given that the following party opposes registration of the indicated application.

Opposer Information

Name	Nextel Communications, Inc.
Granted to Date of previous extension	08/22/2004
Address	Nextel Communications, Inc. 2001 Edmund Halley Drive Reston, VA 20191 UNITED STATES

Attorney information	John I. Stewart, Jr. Crowell & Moring LLP 1001 Pennsylvania Avenue, NW Washington, DC, DC 20004 UNITED STATES jstewart@crowell.com, kherrmann@crowell.com, wsauers@crowell.com Phone:(202) 624-2500
-----------------------------	---

Applicant Information

Application No	78235618	Publication date	02/24/2004
Opposition Filing Date	08/23/2004	Opposition Period Ends	08/22/2004
Applicant	Motorola, Inc.		

Goods/Services Affected by Opposition

Class 009. First Use: 19910506 First Use In Commerce: 19910506 All goods and services in the class are opposed, namely: Two-way radios

Attachments	Notice of Opposition (Executed).pdf (4 pages)
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Signature	/John I. Stewart, Jr./
Name	John I. Stewart, Jr.
Date	08/23/2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE TRADEMARK TRIAL AND APPEAL BOARD

NEXTEL COMMUNICATIONS, INC.,)	
)	
Opposer,)	
	)	Opp. No.: _____
v.	)	App. No.: 78/235,618
	)	Pot. Mark: SENSORY MARK
MOTOROLA, INC.,	)	(911 Hz tone)
)	
Applicant.)	
)	

BOX - TTAB - FEE
Commissioner for Trademarks
2900 Crystal Drive
Arlington, VA 22202-3514

NOTICE OF OPPOSITION

Honorable Commissioner:

NEXTEL COMMUNICATIONS, INC. ("Opposer"), a corporation duly organized and existing under the laws of the State of Delaware, located and doing business at 2001 Edmund Halley Drive, Reston, VA 20191, believing that it will be damaged by registration, hereby opposes Application Serial No. 78/235,618, filed April 9, 2003, under the Trademark Act of 1946, as amended ("Lanham Act"), in the name of MOTOROLA, INC. ("Applicant").

The grounds for opposition are as follows:

1. Opposer is one of the largest providers of cellular telephone and dispatch communications services in the United States, and currently has over 12 million subscribers to its services nationwide.

2. Opposer and Applicant have a long-standing business relationship, whereby Applicant manufactures phones, and accessories therefor, for sale by Opposer for use with Opposer's cellular telephone and dispatch services.

3. Applicant manufactures phones and accessories for Opposer's direct competitors.

4. On April 9, 2003, Applicant filed an application for registration of an electronic sound consisting of a tone at 911 Hz played at a cadence of 25 milliseconds (ms) on, 25 ms off, 25 ms on, 25 ms off, 50 ms on ("the 911 Hz Tone Application"). The 911 Hz Tone Application was assigned Serial No. 78/235,618, and was published for opposition in the Official Gazette on February 24, 2004. As published for opposition, the goods recited in the 911 Hz Tone Application are "[t]wo-way radios."

5. The 911 Hz Tone Application was filed under Section 1(a) of the Lanham Act, and claimed May 6, 1991, as the date of first use and the date of first use in commerce.

6. On October 17, 2003, the United States Patent and Trademark Office ("USPTO") issued an Office Action in connection with the 911 Hz Tone Application, requiring a description of the 911 Hz tone and a specimen evidencing use of the 911 Hz tone in commerce.

7. On October 17, 2003, Applicant submitted a response to the USPTO Office Action. The response included a description of the 911 Hz tone as follows:

"[t]he mark is an electronic chirp consisting of a tone at 911 Hz played at a cadence of 25 ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON."

8. Applicant's response to the USPTO Office Action also included a specimen of use in the form of a compact disc described as "[a] sound file that contains a sound that emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak." The specimen was asserted to have been in use in commerce since at least as early as the filing date of the application.

9. Upon information and belief, Applicant has not used the 911 Hz tone in commerce in connection with the goods listed in the 911 Hz Tone Application, in derogation of Sections 1 and 45 of the Lanham Act. *See* 15 U.S.C. §§ 1051, 1127.

10. Upon information and belief, the 911 Hz tone is not inherently distinctive and has not acquired distinctiveness as to the goods listed in the 911 Hz Tone Application, in derogation of Sections 1, 2, and 45 of the Lanham Act. *See* 15 U.S.C. §§ 1051, 1052, 1127.

11. Opposer avers that, as it is a purchaser and potential purchaser of communications devices incorporating two-way radio capabilities from Applicant and other vendors of such devices, and as Opposer also sells such devices to end users, it will be damaged by the unjustified registration by Applicant of the 911 Hz tone as set forth in the 911 Hz Tone Application.

WHEREFORE, Opposer, NEXTEL COMMUNICATIONS, INC., believes and avers that it will be damaged by registration of the 911 Hz tone as aforesaid, and prays that said Application Serial No. 78/235,618 be rejected, that no

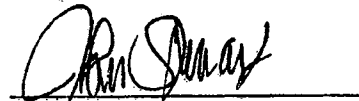
registration be issued thereon to Applicant, and that this Opposition be sustained in favor of Opposer.

Opposer has appointed JOHN I. STEWART, JR., JEFFREY D. SANOK, and MICHAEL H. JACOBS, members of the law firm of CROWELL & MORING LLP, and members of the Bar of the District of Columbia, to prosecute this Opposition proceeding and to transact all business in and before the United States Patent and Trademark Office in connection herewith. Please address all correspondence to:

John I. Stewart, Jr.
Crowell & Moring LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-5116

The filing fee in the amount of \$300.00 should be charged to the Deposit Account of Crowell & Moring LLP, Account Number 05-1323 (Docket #100773.92133US). Please credit any overpayments or charge any additional fees to the Deposit Account of Crowell & Moring LLP, Account Number 05-1323 (Docket #100773.92133US).

Respectfully submitted,



John I. Stewart, Jr.
Attorney for Opposer

August 23, 2004

CROWELL & MORING LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-5116

Opposer's Exhibit 2

ESTTA Tracking number: **ESTTA17332**

Filing date: **10/18/2004**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91161817
Party	Defendant Motorola, Inc. Motorola, Inc. 1303 East Algonquin Road Schaumburg, IL 60196
Correspondence Address	Carolyn E. Knecht Motorola, Inc. 600 North U.S. Highway 45 Libertyville IL U, SA 60196
Submission	Answer
Filer's Name	John T. Gabrielides
Filer's e-mail	officeactions@brinkshofer.com
Signature	/jtg/
Date	10/18/2004
Attachments	Answer 101804 F.pdf (5 pages)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,

Opposer,

v.

MOTOROLA, INC.,

Applicant.

Opposition No.: 91161817

App. No.: 78/235,618

Mark: SENSORY MARK
(911 Hz tone)

ANSWER TO NOTICE OF OPPOSITION

Motorola, Inc. ("Applicant") answers the Notice of Opposition as follows. For the Board's convenience, each allegation in the Notice is set forth below and followed by Applicant's answer thereto.

1. Opposer is one of the largest providers of cellular telephone and dispatch communications services in the United States, and currently has over 12 million subscribers to its services nationwide.

ANSWER: Applicant admits that Opposer is one of the largest providers of cellular telephone services in the United States. Applicant is without information sufficient to form a belief as to the truth of the remaining allegations set forth in paragraph 1, and therefore, denies the allegations.

2. Opposer and Applicant have a long-standing business relationship, whereby Applicant manufactures phones, and accessories therefor, for sale by Opposer for use with Opposer's cellular telephone and dispatch services.

ANSWER: Applicant admits that it has a long-standing business relationship with Opposer. Applicant admits that it is a manufacturer of MOTOROLA phones and phone accessories that function on MOTOROLA network infrastructure operated by Opposer, and which

phones and accessories are sold to Opposer for resale to Opposer's cellular service customers. Applicant is without information sufficient to form a belief as to the truth of the remaining allegations set forth in paragraph 2, and therefore, denies the allegations.

3. Applicant manufactures phones and accessories for Opposer's direct competitors.

ANSWER: Applicant admits that it is a manufacturer of MOTOROLA phones and phone accessories that are sold to Opposer's direct competitors for resale to cellular service customers. Applicant is without information sufficient to form a belief as to the truth of the remaining allegations set forth in paragraph 3, and therefore, denies the allegations.

4. On April 9, 2003, Applicant filed an application for registration of an electronic sound consisting of a tone at 911 Hz played at a cadence of 25 milliseconds (ms) on, 25 ms off, 25 ms on, 25 ms off, 50 ms on ("the 911 Hz Tone Application"). The 911 Hz Tone Application was assigned Serial No. 78/235,618, and was published for opposition in the Official Gazette on February 24, 2004. As published for opposition, the goods recited in the 911 Hz Tone Application are "[t]wo-way radios."

ANSWER: Applicant admits the allegations of paragraph 4.

5. The 911 Hz Tone Application was filed under Section 1(a) of the Lanham Act, and claimed May 6, 1991, as the date of first use and the date of first use in commerce.

ANSWER: Applicant admits the allegations of paragraph 5.

6. On October 17, 2003, the United States Patent and Trademark Office ("USPTO") issued an Office Action in connection with the 911 Hz Tone Application, requiring a description of the 911 Hz tone and a specimen evidencing use of the 911 Hz tone in commerce.

ANSWER: Applicant admits the allegations of paragraph 6.

7. On October 17, 2003, Applicant submitted a response to the USPTO Office Action. The response included a description of the 911 Hz tone as follows: "[t]he mark is an electronic chirp consisting of a tone at 911 Hz played at a cadence of 25 ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON."

ANSWER: Applicant admits the allegations of paragraph 7.

8. Applicant's response to the USPTO Office Action also included a specimen of use in the form of a compact disc described as "[a] sound file that contains a sound that emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak." The specimen was asserted to have been in use in commerce since at least as early as the filing date of the application.

ANSWER: Applicant admits the allegations of paragraph 8.

9. Upon information and belief, Applicant has not used the 911 Hz tone in commerce in connection with the goods listed in the 911 Hz Tone Application, in derogation of Sections 1 and 45 of the Lanham Act. *See* 15 U.S.C. §§ 1051, 1127.

ANSWER: Applicant denies the allegations of paragraph 9.

10. Upon information and belief, the 911 Hz tone is not inherently distinctive and has not acquired distinctiveness as to the goods listed in the 911 Hz Tone Application, in derogation of Sections 1, 2 and 45 of the Lanham Act. *See* 15 U.S.C. §§ 1051, 1052, 1127.

ANSWER: Applicant denies the allegations of paragraph 10.

11. Opposers avers that, as it is a purchaser and potential purchaser of communications devices incorporating two-way radio capabilities from Applicant and other vendors of such devices, and as Opposer also sells such devices to end users, it will be damaged by the unjustified registration by application of the 911 Hz tone as set forth in the 911 Hz Tone Application.

ANSWER: Applicant denies the allegations of paragraph 11.

AFFIRMATIVE DEFENSE

OPPOSER IS ESTOPPED BY ACQUIESCENCE AND/OR LACHES

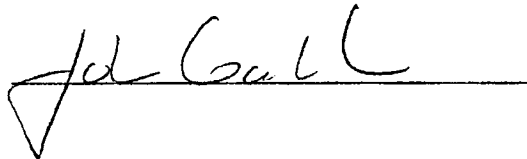
Opposer has long been aware of Applicant's adoption and use of the 911 Hz Tone mark but has failed to object to Applicant's adoption or use thereof, until the filing of the Notice of Opposition. During Opposer's unreasonable delay, Applicant's 911 Hz Tone mark, which is inherently distinctive, has acquired additional distinctiveness and has generated substantial goodwill for Applicant. Applicant has relied to its detriment on

Certificate of Service

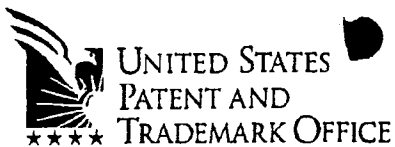
The undersigned hereby certifies that a true and correct copy of the foregoing
ANSWER TO NOTICE OF OPPOSITION was served on Opposer's counsel by first class
mail, postage prepaid, addressed as follows:

John I. Stewart, Jr.
Crowell & Moring, LLP
P.O. Box 14300
Washington, D.C. 20004-4300

on October 18, 2004.

A handwritten signature in cursive script, appearing to read "John I. Stewart, Jr.", is written over a horizontal line.

Opposer's Exhibit 3



Feb 4, 2004

Commissioner for Trademarks
2900 Crystal Drive
Arlington, VA 22202-3514
www.uspto.gov

NOTICE OF PUBLICATION UNDER 12(a)

- | | |
|--------------------------------------|-------------------------------------|
| 1. Serial No.:
78/235,618 | 2. Mark:
No Drawing-Sensory Mark |
| 3. International Class(es):
9 | |
| 4. Publication Date:
Feb 24, 2004 | 5. Applicant:
Motorola, Inc. |

The mark of the application identified appears to be entitled to registration. The mark will, in accordance with Section 12(a) of the Trademark Act of 1946, as amended, be published in the Official Gazette on the date indicated above for the purpose of opposition by any person who believes he will be damaged by the registration of the mark. If no opposition is filed within the time specified by Section 13(a) of the Statute or by rules 2.101 or 2.102 of the Trademark Rules, the Commissioner of Patents and Trademarks may issue a certificate of registration.

Copies of the trademark portion of the Official Gazette containing the publication of the mark may be obtained from:

The Superintendent of Documents
U.S. Government Printing Office
PO Box 371954
Pittsburgh, PA 15250-7954
Phone: (202)512-1800

By direction of the Commissioner.

☐ AMENDMENT STAGE☒ NO CHANGE☒ PUBLICATION/REGISTRATION STAGE

Name TRACY SMITH L.O. 112 Date 01/05/2004 Serial No. 7_ /

INSTRUCTIONS: Place a check mark in the appropriate column and/or box to indicate which data elements have been amended/coded.

Legal Instrument Examiner (LIE)

	Amended	Data Element
Class Data	<input type="checkbox"/>	Prime/International Class
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	<input type="checkbox"/>	First Use in Commerce Date
Mark Data	<input type="checkbox"/>	In Another Form
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	<input type="checkbox"/>	1b
	<input type="checkbox"/>	Word Mark
Misc. Mark Data	<input type="checkbox"/>	Pseudo Mark
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	<input type="checkbox"/>	Design Search Code
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Section 2(f)	<input type="checkbox"/>	Mark Description
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	<input type="checkbox"/>	Lining/Stippling
	<input type="checkbox"/>	Name/Portrait/Consent
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	<input type="checkbox"/>	Section 2(f) in Part
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Amd/Corr Restr.	<input type="checkbox"/>	Foreign Application Number
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	<input type="checkbox"/>	Foreign Registration Number
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Prior U.S. Reg.	<input type="checkbox"/>	Foreign Registration Expiration Date
	<input type="checkbox"/>	Foreign Renewal Reg. Number
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	<input type="checkbox"/>	Foreign Renewal Reg. Date
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	<input type="checkbox"/>	Address 2
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	<input type="checkbox"/>	Zip Code
	<input type="checkbox"/>	Citizenship
I certify that all corrections have been entered in accordance with text editing guidelines.	<input type="checkbox"/>	Entity
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	<input type="checkbox"/>	Assignment(s)/Name Change
LIE TRACY SMITH	<input type="checkbox"/>	Concurrent Use
	<input type="checkbox"/>	Prior Registration
	<input type="checkbox"/>	Attorney
	<input type="checkbox"/>	Domestic Representative
Other:	<input type="checkbox"/>	Attorney Docket Number
	<input type="checkbox"/>	Correspondence Firm Name/Address
	<input type="checkbox"/>	
	<input type="checkbox"/>	

I certify that all corrections have been entered in accordance with text editing guidelines.

LIE TRACY SMITH

Other:

TRADEMARK EXAMINATION WORKSHEET

☒ AMENDMENT STAGE

☐ NO CHANGE

☐ PUBLICATION/REGISTRATION STAGE

Name TRACY SMITH L.O. 112 Date 11/18/2003 Serial No. 7 /

INSTRUCTIONS: Place a check mark in the appropriate column and/or box to indicate which data elements have been amended/coded.

Legal Instrument Examiner (LIE)

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		<input type="checkbox"/> 1b	
Mark Data		<input checked="" type="checkbox"/> Word Mark	<input type="checkbox"/> Pseudo Mark
		<input type="checkbox"/> Mark Drawing Code	<input type="checkbox"/> Design Search Code
		<input type="checkbox"/> Scan Sub Drawing	
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		<input type="checkbox"/> Lining/Stippling	<input type="checkbox"/> Name/Portrait/Consent
		<input type="checkbox"/> Translation	
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		<input type="checkbox"/> Amended Register	<input type="checkbox"/> Amended Register Date
Foreign Reg. Data		<input type="checkbox"/> Foreign Country	<input type="checkbox"/> 44(d)
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Owner Data		<input type="checkbox"/> Owner Name	<input type="checkbox"/> DBA/AKA/TA
		<input type="checkbox"/> Address 1	<input type="checkbox"/> Address 2
		<input type="checkbox"/> City	<input type="checkbox"/> State
		<input type="checkbox"/> Zip Code	
		<input type="checkbox"/> Citizenship	<input type="checkbox"/> Entity
		<input type="checkbox"/> Entity Statement	<input type="checkbox"/> Composed of
		<input type="checkbox"/> Assignment(s)/Name Change	
Amd/Corr Restr.		<input type="checkbox"/> Concurrent Use	
Prior U.S. Reg.		<input type="checkbox"/> Prior Registration	
Correspondence		<input type="checkbox"/> Attorney	<input type="checkbox"/> Domestic Representative
		<input type="checkbox"/> Attorney Docket Number	
		<input type="checkbox"/> Correspondence Firm Name/Address	

I certify that all corrections have been entered in accordance with text editing guidelines.

LIE

Other:

Cofm 10/17/03

TRACY SMITH

11/18/2003

NOV 20 2003

Incoming Correspondence Routing Sheet

To: TMO LAW OFFICE 112 - AWAITING RESPONSE DOCKET

Word Mark: (Design Mark Only)

Serial No: 78235618



Mail Date: 10202003



Doc. Type: Responses to Office Actions



No Fee

RAM Mail Date: 102003



RECEIVED
2003 NOV -7 A 10:33
TMO
LAW OFFICE 112

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Motorola, Inc. Examining Attorney: Patricia Malesardi Evanko
Serial No: 78235618 Law Office: 112
Filed: April 22, 2003 Int'l Class: 009
Mark: (SENSORY MARK ONLY)
Attorney Docket No: TM03-1006

October 17, 2003

BOX ITU
NO FEE
Commissioner for Trademarks
2900 Crystal Drive
Arlington, Virginia 22202-3514

RECEIVED
2003 NOV -7 A 10:33
TME0
LAW OFFICE 112

RESPONSE TO OFFICE ACTION DATED OCTOBER 17, 2003 WITH DECLARATION

CERTIFICATE OF MAILING BY FIRST CLASS MAIL	
I, <u>Kristen D. Poggensee</u> , hereby certify that this correspondence is	
(printed name)	
being deposited with the United States Postal Service on <u>10/17/03</u> as first	
	(date)
class mail in an envelope addressed to: Commissioner for Trademarks, 2900 Crystal Drive, Arlington, Virginia 22202-3514, on:	
Date: <u>10/17/03</u>	Signature: <u>Kristen D. Poggensee</u>

Responsive to the Office Action dated October 17, 2003, Applicant submits the following description of the mark:

The mark is an electronic chirp consisting of a tone at 911 Hz played at a cadence of 25 ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON.

Applicant submits a CD specimen for the above-referenced sound mark. TMEP §904, §1202.15. The specimen is a sound file that contains a sound that emanates from a two-way radio to alert user or receiver of an incoming call or the availability to speak.



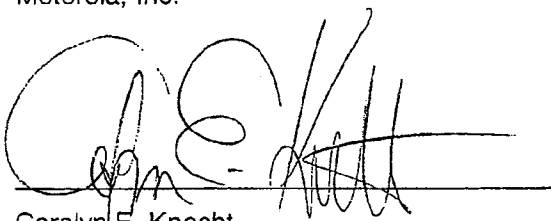
10-20-2003

The specimen being submitted was in use in commerce at least as early as the filing date of the application.

DECLARATION

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application or any resulting registration, declares that the facts set forth in this application are true; all statements made of his own knowledge are true; and all statements made on information and belief are believed to be true.

Motorola, Inc.

A handwritten signature in black ink, appearing to read 'Carolyn E. Knecht', written over a horizontal line.

Carolyn E. Knecht

Senior Trademark Counsel

Date:

Oct. 17, 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Motorola Inc. Examining Attorney: Patricia Malesardi Evanko
Serial No: 7823561B Law Office: 112
Filed: April 22, 2003 Int'l Class: 009
Mark: (SENSORY MARK ONLY)
Attorney Docket No: TM03-1006

October 17, 2003

BOX ITU
NO FEE
Commissioner for Trademarks
2900 Crystal Drive
Arlington, Virginia 22202-3514

RESPONSE TO OFFICE ACTION DATED OCTOBER 17, 2003 WITH DECLARATION

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being deposited with the United States Postal Service on <u>10/17/03</u> as first	
(date)	
class mail in an envelope addressed to: Commissioner for Trademarks, 2900 Crystal Drive, Arlington, Virginia 22202-3514, on:	
Date: <u>10/17/03</u>	Signature: <u>Kristen D. Poggensee</u>

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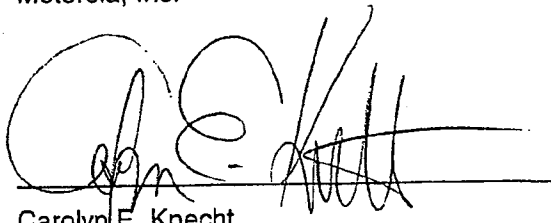
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Carolyn E. Knecht

Senior Trademark Counsel

Date: Oct. 17, 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Motorola, Inc. Examining Attorney: Patricia Malesardi Evanko
Serial No: 78235618 Law Office: 112
Filed: April 22, 2003 Int'l Class: 009
Mark: (SENSORY MARK ONLY)
Attorney Docket No: TM03-1006

October 17, 2003

BOX ITU
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Commissioner for Trademarks
2900 Crystal Drive
Arlington, Virginia 22202-3514

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class mail in an envelope addressed to: Commissioner for Trademarks, 2900 Crystal Drive, Arlington, Virginia 22202-3514, on:	
Date: <u>10/17/03</u>	Signature: <u>Kristen D. Poggensee</u>

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The mark is an electronic chirp consisting of a tone at 911 Hz played at a cadence of 25 ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON.

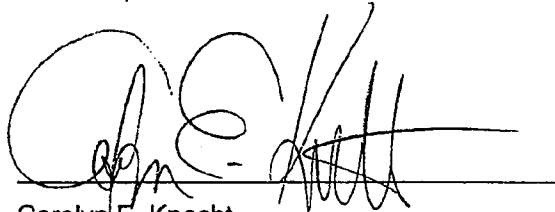
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Motorola, Inc.

A handwritten signature in black ink, appearing to read 'Carolyn E. Knecht', written over a horizontal line.

Carolyn E. Knecht

Senior Trademark Counsel

Date: Oct. 17, 2003

↑

To: Motorola, Inc. (carrie.knecht@motorola.com)
Subject: TRADEMARK APPLICATION NO. 78235618 - TM03-1006
Sent: 10/17/03 9:43:04 AM
Sent As: ECom112
Attachments:

UNITED STATES PATENT AND TRADEMARK OFFICE

SERIAL NO: 78/235618

APPLICANT: Motorola, Inc.

CORRESPONDENT ADDRESS:

Carolyn E. Knecht
Motorola, Inc.
600 North U.S. Highway 45
Libertyville IL USA 60196

RETURN ADDRESS:

Commissioner for Trademarks
2900 Crystal Drive
Arlington, VA 22202-3514
ecom112@uspto.gov

MARK:

CORRESPONDENT'S REFERENCE/DOCKET NO: TM03-1006

CORRESPONDENT EMAIL ADDRESS:

carrie.knecht@motorola.com

Please provide in all correspondence:

1. Filing date, serial number, mark and applicant's name.
2. Date of this Office Action.
3. Examining Attorney's name and Law Office number.
4. Your telephone number and e-mail address.

OFFICE ACTION

TO AVOID ABANDONMENT, WE MUST RECEIVE A PROPER RESPONSE TO THIS OFFICE ACTION WITHIN 6 MONTHS OF OUR MAILING OR E-MAILING DATE.

RE: Serial Number 78/235618

The assigned examining attorney has reviewed the referenced application and determined the following.

Search Results

The examining attorney has searched the Office records and has found no similar registered or pending mark which would bar registration under Trademark Act Section 2(d), 15 U.S.C. §1052(d). TMEP §704.02.

Description of the Mark Needed

The applicant must submit a concise description of the mark. 37 C.F.R. §2.37; TMEP §§808 *et seq.* The description must identify the sound mark in common English terms. For example, the following form is acceptable, if accurate:

The mark consists of the sound of [specify, e.g., a ringing telephone].

To respond formally using the Office's Trademark Electronic Application System (TEAS), visit <http://www.uspto.gov/teas/index.html> and follow the instructions.

To respond formally via E-mail, visit <http://www.uspto.gov/web/trademarks/tmelecresp.htm> and follow the instructions.

To respond formally via regular mail, your response should be sent to the mailing Return Address listed above and include the serial number, law office and examining attorney's name on the upper right corner of each page of your response.

To check the status of your application at any time, visit the Office's Trademark Applications and Registrations Retrieval (TARR) system at <http://tarr.uspto.gov/>

For general and other useful information about trademarks, you are encouraged to visit the Office's web site at <http://www.uspto.gov/main/trademarks.htm>

FOR INQUIRIES OR QUESTIONS ABOUT THIS OFFICE ACTION, PLEASE CONTACT THE ASSIGNED EXAMINING ATTORNEY.

DOCUMENT INFORMATION	
TRADEMARK/SERVICEMARK APPLICATION	
VERSION 1.24	
APPLICANT INFORMATION	
NAME	Motorola, Inc.
STREET	1303 East Algonquin Road
CITY	Schaumburg
STATE	IL
COUNTRY	USA
ZIP/POSTAL CODE	60196
TELEPHONE NUMBER	847-523-1633
FAX NUMBER	847-523-4348
APPLICANT ENTITY INFORMATION	
CORPORATION: STATE/COUNTRY OF INCORPORATION	Delaware
TRADEMARK/SERVICEMARK INFORMATION	
MARK	NO DRAWING (SOUND MARK)
TYPED FORM	Yes
BASIS FOR FILING AND GOODS/SERVICES INFORMATION	
USE IN COMMERCE: SECTION 1(a)	Yes
SPECIMEN	Yes
SPECIMEN DESCRIPTION	A sound specimen for this application has been submitted separately to the TEAS Help Section.

78235618

INTERNATIONAL CLASS NUMBER	009
LISTING OF GOODS AND/OR SERVICES	Two-way radios
FIRST USE ANYWHERE DATE	05/06/1991
FIRST USE IN COMMERCE DATE	05/06/1991
OPTIONAL INFORMATION	
DESCRIPTION OF THE MARK	The mark consists of a tone at 911 Hz played at a cadence of 25ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON..
ATTORNEY INFORMATION	
NAME	Carolyn E. Knecht
STREET	600 North U.S. Highway 45
CITY	Libertyville
STATE	IL
COUNTRY	USA
ZIP/POSTAL CODE	60196
FIRM NAME	Motorola, Inc.
E-MAIL ADDRESS	carrie.knecht@motorola.com
AUTHORIZE E-MAIL COMMUNICATION	Yes
TELEPHONE NUMBER	847-523-5876
FAX NUMBER	847-523-4348
ATTORNEY DOCKET NUMBER	TM03-1006
OTHER APPOINTED	Arch M. Ahern

78235618

ATTORNEY(S)	
FEE INFORMATION	
TOTAL FEES PAID	335
NUMBER OF CLASSES PAID	1
NUMBER OF CLASSES	1
LAW OFFICE INFORMATION	
E-MAIL ADDRESS FOR CORRESPONDENCE	carrie.knecht@motorola.com
SIGNATURE AND OTHER INFORMATION	
SIGNATURE	/cek/
DATE	04/09/2003
NAME	Carolyn E. Knecht
TITLE	Senior Trademark Counsel
MAILING ADDRESS	
LINE	Carolyn E. Knecht
LINE	Motorola, Inc.
LINE	600 North U.S. Highway 45
LINE	Libertyville IL USA 60196
SERIAL NUMBER INFORMATION	
SERIAL NUMBER	78235618
RAM INFORMATION	
RAM SALE NUMBER	828
RAM ACCOUNTING DATE	04/09/2003

INTERNET TRANSMISSION DATE	Wed Apr 09 13:04:09 EDT 2003
TEAS STAMP	USPTO/BAS-1361822222-20030409130409526135-78235618- 200551f906c6de47dcd8f64dcaa871f0ad-DA-828-20030409130129232154
E-MAIL ADDRESS FOR ACKNOWLEDGMENT	kristen.poggensee@motorola.com

<SERIAL NUMBER> 78235618
<FILING DATE> 04/09/2003

<DOCUMENT INFORMATION>
<TRADEMARK/SERVICEMARK APPLICATION>
<VERSION 1.24>

<APPLICANT INFORMATION>

<NAME>	Motorola, Inc.
<STREET>	1303 East Algonquin Road
<CITY>	Schaumburg
<STATE>	IL
<COUNTRY>	USA
<ZIP/POSTAL CODE>	60196
<TELEPHONE NUMBER>	847-523-1633
<FAX NUMBER>	847-523-4348

<APPLICANT ENTITY INFORMATION>

<CORPORATION: STATE/COUNTRY OF INCORPORATION> Delaware

<TRADEMARK/SERVICEMARK INFORMATION>

<MARK> NO DRAWING (SOUND MARK)
<TYPED FORM> Yes

~Applicant requests registration of the above-identified trademark/service mark in the United States Patent and Trademark Office on the Principal Register established by the Act of July 5, 1946 (15 U.S.C. Section 1051 et seq., as amended).~

<BASIS FOR FILING AND GOODS/SERVICES INFORMATION>

<USE IN COMMERCE: SECTION 1(a)> Yes

~The applicant is using the mark in commerce, or the applicant's related company or licensee is using the mark in commerce, or the applicant's predecessor in interest used the mark in commerce, on or in connection with the identified goods and/or services. 15 U.S.C. Section 1051(a), as amended.~

Applicant attaches one SPECIMEN for each class showing the mark as used in commerce on or in connection with any item in the class of listed goods and/or services.

<SPECIMEN> Yes

<SPECIMEN DESCRIPTION> A sound specimen for this application has been submitted separately to the TEAS Help Section.

<INTERNATIONAL CLASS NUMBER> 009

<LISTING OF GOODS AND/OR SERVICES> Two-way radios

<FIRST USE ANYWHERE DATE> 05/06/1991
<FIRST USE IN COMMERCE DATE> 05/06/1991

<OPTIONAL INFORMATION>

<DESCRIPTION OF THE MARK> The mark consists of a tone at 911 Hz played at a cadence of 25ms ON, 25 ms OFF, 25 ms ON, 25 ms OFF, 50 ms ON..

<ATTORNEY INFORMATION>

<NAME> Carolyn E. Knecht
<STREET> 600 North U.S. Highway 45
<CITY> Libertyville
<STATE> IL
<COUNTRY> USA
<ZIP/POSTAL CODE> 60196
<FIRM NAME> Motorola, Inc.
<E-MAIL ADDRESS> carrie.knecht@motorola.com
<AUTHORIZE E-MAIL COMMUNICATION> Yes
<TELEPHONE NUMBER> 847-523-5876
<FAX NUMBER> 847-523-4348
<ATTORNEY DOCKET NUMBER> TM03-1006
<OTHER APPOINTED ATTORNEY(S)> Arch M. Ahern

<FEE INFORMATION>

<TOTAL FEES PAID> 335
<NUMBER OF CLASSES PAID> 1
<NUMBER OF CLASSES> 1

<LAW OFFICE INFORMATION>

~The USPTO is authorized to communicate with the applicant's attorney at the below e-mail address~

<E-MAIL ADDRESS FOR CORRESPONDENCE> carrie.knecht@motorola.com

<SIGNATURE AND OTHER INFORMATION>

~The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. Section 1001, and that such willful false statements, and the like, may jeopardize the validity of the application or any resulting registration, declares that he/she is properly authorized to execute this application on behalf of the applicant; he/she believes the applicant to be the owner of the trademark/service mark sought to be registered, or, if the application is being filed under 15 U.S.C. Section 1051(b), he/she believes applicant to be entitled to use such mark in

78235618

commerce; to the best of his/her knowledge and belief no other person, firm, corporation, or association has the right to use the mark in commerce, either in the identical form thereof or in such near resemblance thereto as to be likely, when used on or in connection with the goods/services of such other person, to cause confusion, or to cause mistake, or to deceive; and that all statements made of his/her own knowledge are true; and that all statements made on information and belief are believed to be true.~

<SIGNATURE> /cek/
<DATE> 04/09/2003
<NAME> Carolyn E. Knecht
<TITLE> Senior Trademark Counsel

<MAILING ADDRESS>
<LINE> Carolyn E. Knecht
<LINE> Motorola, Inc.
<LINE> 600 North U.S. Highway 45
<LINE> Libertyville IL USA 60196

<SERIAL NUMBER INFORMATION>
<SERIAL NUMBER> 78235618

<RAM INFORMATION>
<RAM SALE NUMBER> 828
<RAM ACCOUNTING DATE> 04/09/2003
<INTERNET TRANSMISSION DATE> Wed Apr 09 13:04:09 EDT 2003
<TEAS STAMP>
USPTO/BAS-1361822222-20030409130409526135-78235618-
200551f906c6de47dcd8f64dcaa871f0ad-DA-828-20030409130129232154
E-MAIL ADDRESS FOR ACKNOWLEDGMENT> kristen.poggensee@motorola.com

Internet Transmission Date:
2003/04/09

Serial Number:
78235618

Filing Date:
2003/04/09



TRADEMARK APPLICATION

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

TOTAL FEES PAID: \$335

RAM SALE NUMBER: 828
RAM ACCOUNTING DATE: 04/09/2003



NO OCR



04-09-2003

Opposer's Exhibit 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

NEXTEL COMMUNICATIONS, INC.,)
Opposer,) Opp. No. 91/161,817
vs.) App. No. 78/235,618
MOTOROLA, INC.,) Pot. Mark: SENSORY MARK
Applicant.) (911 Hz tone)

The videotape deposition of DAVID ERIC KLEIN,
called by the Opposer for examination, taken before
RICHARD H. DAGDIGIAN, CSR No. 084-000035, a notary public
within and for the County of Cook, State of Illinois, and a
Certified Shorthand Reporter of said State, at the offices
of Brinks Hofer Gilson & Lione, 455 North Cityfront Plaza
Drive, Suite 3600, on the 19th day of Jul 2005, commencing
at 10:15 a.m.

1 APPEARANCES:

2 CROWELL & MORING

3 BY: JOHN I. STEWART, ESQ.

4 KAREN C. HERMANN, ESQ.

5 1001 Pennsylvania Avenue, NW

6 Washington, D.C. 20004-2595

7 (202) 624-2685

8 on behalf of the Opposer;

9
10 BRINKS HOFER GILSON & LIONE

11 BY: THOMAS M. WILLIAMS, ESQ.

12 455 N. Cityfront Plaza Drive, Suite 3600

13 Chicago, Illinois 60611-5599

14 (312) 321-4717

15 on behalf of the Applicant.

16
17 ALSO PRESENT:

18 CAROLYN E. KNECHT, ESQ.

19 Senior Counsel Trademarks,

20 and

21 KRISTEN POGGENSEE, Paralegal Associate,

22 Corporate Law Department

23 Motorola, Inc.

24
25 DEAN MARIS, Legal Videographer

1 Then it's pretty much the two major ways; the
2 research itself could be involving interaction with
3 customers, our own internal understanding of things. It's
4 different approaches.

5 Q Have you ever -- or has this organization --
6 sorry -- ever done research on the 911 Hz Tone itself?

7 A Specific to the 911 Hz Tone, I am unaware of any
8 research focused directly at that tone.

9 Q Are you aware of any research results that are
10 related directly to the 911 Hz Tone?

11 A No research results. We have heard customer
12 feedback in interviews. I am not aware if it's tangible
13 documentation as far as notes taken and recorded, though.

14 Q What's the nature of that customer feedback?

15 A Training and understanding how the product works.
16 If they are to replace a product, they need to know that the
17 user is able to understand how to use and feels comfortable
18 with it, and understands that they know it.

19 Q And how did that customer feedback relate
20 directly to the 911 Hz Tone?

21 A We have, consistent with our tones, over the life
22 of the products, specifically for -- the internal term we
23 use is "Hands on, eyes off".

24 Customers, without focusing on the products,
25 understand what's happening, understand when the mike is

1 active. They are told in a consistent manner, and if they
2 are using a Motorola product, there is an understanding that
3 we -- that we have been consistent such that if they replace
4 that Motorola product with another Motorola product,
5 training of certain aspects of the radio are at a minimum or
6 not even required.

7 Q Because they can use it in the same way as they
8 have used prior products?

9 A They are able to -- they are very attuned to
10 particular sounds, and it allows them to understand what's
11 happening without them interacting.

12 So we have been consistent, and they are familiar
13 enough with our products to know that tone means they can
14 now talk.

15 Q Have you in the course of this product definition
16 marketing organization's activities -- have you or others
17 within the organization looked at competitors' products that
18 are within the same product sector?

19 A We have -- we have reviewed competitors' products
20 from a feature standpoint, aspects to how a bid is written
21 or a request for proposal or request for bid, and we also
22 analyze the products overall -- alterability, robustness;
23 items that are very key to the customer, especially when
24 they want a long lasting product, so key focus points we
25 have on the durability, things like that.

1 is coming from a Motorola product.

2 Q Just a second on that. How do they know that
3 it's coming from a Motorola product?

4 A There is a variety of ways. Motorola trains end
5 users specifically in the tone; tones mentioned in end user
6 documentation manuals, user guides.

7 The tone is heard at trade shows and in other
8 events. Motorola provides a system that is at a trade show
9 and be able to show the radio is communicating on the
10 infrastructure, and that tone is audible there.

11 There is many -- many times, the sales folks will
12 visit a customer and bring new products, and they can
13 configure their products such that they can operate on the
14 system and, then, they can show the customer the new
15 products, and that -- and that tone, that audible tone is
16 heard during the transmission attempts.

17 Q And is that all?

18 A Let me think. Manual, training, trade shows.
19 There is -- to the best of my knowledge, I believe that's --
20 that's my understanding of the association.

21 And in addition to the -- you know -- the
22 Motorola products themselves make the tone; the emblem or
23 the embossed label, the product is there.

24 As a matter of fact, we go through effort to make
25 sure it can't be worn away. It appears multiple times on

1 the product such that when you hear that tone, you are
2 presented with the Motorola label, the trademarks, the
3 bat wing emblem, things like that.

4 So it's been that way for a while. So the
5 repetition of the products, the repetition of the training,
6 the consistencies are kind of the -- of that linkage.

7 Q Is that all?

8 A To what I can recall right now, yes.

9 Q If you recall anything further, please let me
10 know.

11 A Okay.

12 Q You said that customers know it's from a Motorola
13 product. And you listed these as ways in which a customer
14 might know that.

15 Do you have any direct evidence that customers do
16 know that the tone is emanated -- that the tone is a
17 Motorola tone?

18 A I have no research statements that says that's
19 fact. It's -- I don't have any research that gives that
20 fact.

21 Q Do you have any other evidence that would
22 demonstrate that a customer actually knows that this tone is
23 a Motorola tone?

24 A From my own personal job related experience,
25 explicitly it's been interaction with customers who do not

1 refer to it as their radio, but refer to it as their
2 Motorola radio and, you know, the use of it -- when talking
3 with them, you know, statements about what sounds it makes,
4 was it explicit to a 911 tone? No, it was with reference to
5 the tones that it makes.

6 Q Are you aware whether any other -- whether any
7 product manufactured by any other manufacturer emits the
8 same tone?

9 A Define "manufactured".

10 Q I'm stumped. Well, are you trying to distinguish
11 between manufacturing and assembling, or what?

12 A Integrators --

13 Q Integrators?

14 A We have integrators.

15 Q Who buy Motorola manufactured devices and then
16 sell them as part of a system, is that what you are talking
17 about?

18 A Integrators that would purchase a Motorola radio
19 with -- you know -- with our understanding that they would
20 be placing it in either their product or a helicopter or
21 something like that.

22 Q In those situations, is the radio branded as a
23 Motorola radio, or by the integrator?

24 A I am not sure in all cases. For a particular
25 case, it is branded as their products on the face of the

1 products -- an E. F. Johnson portable radio, mobile radio.

2 Q Beyond that, that kind of situation, are you
3 aware of other manufacturers who produce products that emit
4 a 911 Hz Tone?

5 A No, I'm not aware of any other.

6 Q Have you ever attempted to determine whether
7 there was any such product?

8 A I myself have not actively sought to investigate
9 that occurrence. I personally have not.

10 I am not aware -- to the best of my knowledge,
11 I'm not aware if other people have actively investigated
12 that.

13 Q Who would you ask if you wanted to find out
14 whether Motorola -- anyone within Motorola had sought to
15 determine that fact?

16 A I'm not a hundred percent sure. I would probably
17 ask members -- or people who are involved with our
18 Competitive Information Group.

19 Q Who are they?

20 A I specifically interface with Andres LaCambras.
21 I can't spell that.

22 Q And he's within GEMS?

23 A Yes, he is.

24 Q By the way, GEMS is an acronym, is that correct?

25 A Yes it is.

1 Q What's it stands for?

2 A Government and Enterprise Mobile -- I think it's
3 Mobile Solutions.

4 Q Okay. Fair enough. Which of the four
5 organizations -- I'm sorry, let me start over.

6 The Competitive Information Group, is that within
7 a business unit of GEMS?

8 A It is handled within the business unit of GEMS.

9 Q And what organization within the business unit?

10 A I'm not a hundred percent sure. There are --
11 there is different people who help on different things.

12 Q Okay. Going back to my first question, the
13 function that is represented by the 911 Hz Tone as used in
14 the Motorola products is that the channel is available for
15 communication or the microphone is active and transmitting,
16 is that right?

17 A Correct.

18 Q Is there a short version of that that you use to
19 describe that function in your devices?

20 A The training manuals and the user guide speak to
21 it in two different ways, depending upon the group that
22 these manuals are designed for.

23 One refers to it as the Talk-Permits tone, and
24 one of it refers to as the Call-Back tone.

25 Q What's the difference between those two?

1 A The Talk-Permit tone says that you pressed the
2 PTT button, the push-to-talk button, and the channel is
3 available, and the microphone is enabled or active for a
4 Talk-Permit tone to occur.

5 So once the radio is in that state of Talk-Permit
6 tone, the radio plays the Talk-Permit tone or gives the
7 Talk-Permit tone.

8 Q Now, do these 911 Hz Tone products -- those are
9 the two-way radios we have been talking about --

10 A Okay --

11 Q Also emit other tones?

12 A Yes, they do.

13 Q How many?

14 A Somewhere in the range of nine to 12 different
15 tones.

16 Q And what are the functions that these other tones
17 serve?

18 A They range from -- there is no -- there is no
19 channel available during communication, so it's a -- it's a
20 Talk-Prohibit tone, to items like low battery.

21 Q And do you engage in the same effort to make sure
22 that successive generations of two-way radio products use
23 the same tones for consistent functional references?

24 A Yes, we do.

25 Q And so these other tones have also been kept

1 Q Is it your belief that someone within Motorola
2 created it for the first time?

3 A Yes, that is my belief.

4 Q On what do you base that belief on?

5 A I base -- I base that belief on conversations
6 with Marlon Moo-Young and with Mitch Leshim.

7 Q And what did they tell you that led you to that
8 belief?

9 A The creation of the tone itself has roots in the
10 time aspects, when they were originally defining the
11 trunking protocol. These time aspects were specific -- or
12 were not known or stipulated before that effort.

13 Q Explain that a bit further, if you would. What
14 time aspects are you referring to?

15 A The first radio was designed such that it would
16 operate on a -- on this trunking protocol, a particular
17 language used, communicates. There is expectations that
18 information will be transmitted in a certain period of time
19 .

20 These tones are based upon -- my understanding --
21 a selection of certain groupings of these time periods in
22 association with a particular selection of a pitch such that
23 an esthetic tone was created.

24 Q First, with respect to the time periods, are you
25 referring to the duration of the entire time or the cadence

1 of the tone?

2 A The cadence.

3 Q And in what way is the cadence related -- I'm
4 sorry, is the cadence then related technically to the
5 transmission speed of the trunking protocol that was being
6 put in place?

7 A Not technically. There is some relationship, but
8 it's not technically related to.

9 Q In what way is it related?

10 A The radio was producing -- was producing events
11 every 23 and a third milliseconds. They used that event and
12 multiples of that evens to create their cadence.

13 Q I see. Is there any significance to the duration
14 of the tone in its entirety?

15 A No.

16 Q Is there any significance to the number of sounds
17 within the tone in its entirety?

18 A No.

19 Q Was the 911 Hz Tone ever produced at a different
20 frequency?

21 A Can you clarify.

22 Q Was it ever a 900 Hz Tone?

23 A To the best of my knowledge, it has been anywhere
24 between 909.9999 and 911 based upon just Aaron creating a
25 frequency, but indistinguishable to the ear of the tone.

1 So the tone audibly has always come across as 911
2 or -- at that particular frequency pitch.

3 Q Was there any reason to select that range, 910 to
4 911, as opposed to another frequency range for this tone?

5 A It is my understanding that the frequency
6 generator originally used in the MTX 300T was such that it
7 could generate a frequency of 150, and they selected a
8 six-times multiplier of that because of the estheticness of
9 the tone.

10 Q How did you learn this information?

11 A This was again speaking with Marlon and with
12 Mitch Leshim.

13 Q So why -- if the frequency generated 150 hertz,
14 911 is not a six-times multiplier of 150.

15 A There is error to the -- to the item, and that's
16 how it -- it's my understanding that's how they got to that
17 frequency point.

18 Q So is it -- was it designed to be 900 Hz, is that
19 what you are saying?

20 A No, it was -- it was designed to be -- the
21 frequency generator is not explicitly 150. It's 150 point
22 something such that when it multiplies out, it starts
23 getting higher.

24 It was an understood tool of the time so they
25 were able to identify what the frequency was going to be.

1 Q Now, the third one is called the Call Back. Is
2 that the 911 Hz Tone?

3 A Correct, it is.

4 Q And it's described as, "Three short, high pitched
5 di-di-dit, indicate channel availability". Do you see that?

6 A Yes, I do.

7 Q And if you turn over to the next page on the
8 left-hand side, Page 14 of the manual, there is a Talk
9 Permit listing that says "Same as call back"?

10 A Correct.

11 Q Now, -- and that's the 911 Hz Tone as well?

12 A Correct.

13 Q Now, there is no reference to 911 Hz in this
14 document, is that right?

15 A I have not fully reviewed the document, but it's
16 my assumption that it is referenced as the Talk Permit or
17 the Call Back tone.

18 Q And these two tones are in a list of other
19 audible tones.

20 A Yes.

21 Q And it looks to me like there are 23 of them in
22 all.

23 A Correct.

24 Q Okay. And are all those tones different from
25 each other?

1 A It is my understanding, based upon interaction
2 with user guides, that if the tone is the same, it would
3 stipulate that it is the same between the indications of
4 what the tone means.

5 Q Okay. As it does with Talk Permit?

6 A Yes.

7 Q Okay. If you look below Call Back on 321, there
8 is Clear Mode Transmit is the next one in alphabetical order
9 and that's described as a high pitched beep, do you
10 see that?

11 A Yes, I do.

12 Q Now is that beep also at 911 Hz?

13 A I cannot answer that question. I have not spent
14 time investigating that particular tone.

15 Q Are any of the other tones emitted by this radio
16 -- for these purposes -- emitted at the frequency of 911 Hz?

17 A I cannot answer the question. I am not -- I've
18 not researched these tones enough to verify the exact
19 frequency they operate on.

20 Q Were all of the tones emitted by the first
21 product in this line, the 300T, multiples of 150 hertz?

22 A It is my understanding from discussions that they
23 were multiples of 150 Hz -- or 150 points, whatever Hz.

24 Q 150 plus or minus?

25 A Correct.

1 Q Do you know -- so that presents a somewhat
2 limited number of potential frequencies at which tones could
3 be generated, correct?

4 A I believe multiples of 150 Hz.

5 Q Do you know whether any of the other tones in
6 that radio were at 911 Hz?

7 A Again, I would have to go back and investigate
8 that particular -- if those tones are consistent, they
9 should be the same as -- the tones that were in existence in
10 that product should be consistent with the tones that are
11 described here in this product.

12 Q Because of your intention to make sure that there
13 was consistent use across successive products?

14 A Correct.

15 Q And the STX 800 is a successor to the MTX 300T?

16 A Correct, it is.

17 Q Have you looked -- have you looked at any of the
18 other tones emitted by these 911 Hz Tone products in terms
19 of analyzing their frequency and cadence and the like?

20 MR. WILLIAMS: Objection, that's vague.

21 A I have not investigated these tones in reference
22 to 911 -- the 911 Hz Tone.

23 BY MR. STEWART:

24 Q Have you investigated what frequency the other
25 tones are emitted at?

1 A No, I have not. I have not investigated the
2 other frequencies these tones are emitted at.

3 Q Does the fact that the -- that the first four
4 tones there or maybe five tones are identified as
5 "high-pitched" suggest that they are all the same frequency?

6 MR. WILLIAMS: Objection, that's vague.

7 BY MR. STEWART:

8 Q Are you able to answer that question. I'm sorry,
9 I meant to ask you to go ahead and answer.

10 A It would be presumptuous for me to identify what
11 intention or what perception a radio would have.

12 Q Do you know from your actual use of these -- or
13 experience with these 911 Hz -- I'm sorry.

14 You have actually used 911 Hz Tone product
15 radios, have you not?

16 A Yes, I have.

17 Q Are you familiar based on that experience with
18 whether more than the Call Back tone is emitted at 911 Hz?

19 A I cannot say whether more than the Call Back and
20 Tone Permit tone are at 911 Hz. They are the most often
21 heard tones that I have in interacting.

22 Q Do they -- just in terms of frequency alone, do
23 other tones sound like the same frequency as the Call Back
24 tone?

25 A It's difficult to answer because of the different

1 cadences of the tones.

2 Q You can't distinguish between the cadence and the
3 frequency of a tone?

4 A No, the tones are of X -- frequency X pitch. A
5 majority of the time, I'm not utilizing the features that
6 interact with other of these tones, or I am just
7 particularly not paying attention when they come in such
8 that I would be monitoring whether they are the same tones.

9 Q Is it possible that multiple tones use the same
10 frequency on these products?

11 MR. WILLIAMS: Objection, vague.

12 A I do not know.

13 MR. STEWART: Next I would like to have marked as
14 Klein Exhibit 4 another user manual.

15 (Klein Deposition Exhibit
16 No. 4 was marked as
17 requested.)

18 BY MR. STEWART:

19 Q If you would turn first to the page marked
20 000269. On the left-hand side, there, page eight of the
21 manual, there is the Talk Permit and the Call Permit -- I'm
22 sorry -- Call Back alert tones there as well, do you see
23 that?

24 A Yes, I do.

25 Q And is that the 911 Hz Tone that we are talking

1 about here?

2 A The Talk-Permit tone?

3 Q Yes.

4 A Yes.

5 Q And Call Back also?

6 A Yes.

7 Q And it is described slightly differently from the
8 previous manual that we looked at, do you see that?

9 A It is -- it is "Dih-dih-dit". The description
10 specifically -- I need some clarification on the exact --

11 Q It's slightly different, don't you think?

12 A The description of the tone?

13 Q Yes.

14 A There is. There is a greater amount of verbiage
15 on the second.

16 Q And the second one is the MTX 800. Do you know
17 where that fits in terms of time? There is not a copyright
18 date on this one -- vis-a-vis the STX 800?

19 A It is my recollection that the MTX 800 was the
20 follow-on to the STX products.

21 Q Okay. And over on the page 000271 --

22 A Excuse me, which page?

23 Q 000271, a couple of pages later, under -- in the
24 upper left-hand side of the page, "Making Dispatch Calls",
25 that is a description, is it not, of the generation of the

1 911 Hz Tone that we have been talking about?

2 A Yes, it is.

3 MR. STEWART: Okay. Now, one more user manual. I
4 would like to mark this as Klein Exhibit 5.

5 (Klein Deposition Exhibit
6 No. 5 was marked as
7 requested.)

8 MR. STEWART:

9 Q Now, this has a copyright date on the second page
10 -- no, where is it.

11 MR. WILLIAMS: I think you gave me something extra
12 here. This isn't part of 5.

13 MR. STEWART: Thank you.

14 A What page are you on?

15 BY MR. STEWART:

16 Q It actually on 2207. There is a 2003 copyright
17 date.

18 A 2207?

19 Q Right.

20 A There is a 2003 copyright, correct.

21 Q Now, is this a current product?

22 A This is a currently shipping product.

23 Q Do you know whether this is the current user
24 guide for this product?

25 A This is the current user guide, to the best of my

1 knowledge, specific to the Project 25 version of this
2 product.

3 Q And what is Project 25?

4 A It is a -- the open -- it's an organization that
5 has helped to define the APCO communication standard that we
6 have branded as Astro for our features and functions that
7 support that standard.

8 Q And that standard is an interoperability
9 standard, is that right?

10 A It is an open protocol, so it does create
11 interoperability.

12 Q Now, if you turn to 2215, which is page six of
13 the guide, you see here we have the list of tones again?

14 A Correct.

15 Q This one is different because it is -- the tones
16 are grouped together with -- under a "Sound" description, do
17 you see that?

18 A Yes, I do.

19 Q If you turn over to the page labeled 2217 which
20 is page eight of the user guide --

21 A Correct.

22 Q Do you see under "Sound" it says, "A Group of
23 Medium-pitched Tones", do you see that?

24 A Yes, I do.

25 Q And Talk Permit is one of those tones?

1 A Yes, it is.

2 Q Now, does that mean that the -- that the
3 frequency of the tone was changed in this product?

4 A No, it was not.

5 Q But it's described as medium-pitched as opposed
6 to high-pitched here?

7 A Yes, it is.

8 Q Do you know why that is?

9 A It's my understanding -- and this is strictly
10 based upon personal experience in helping to work on these
11 manuals -- that there was an attempt to help organize these
12 tones so that it was easier to reference.

13 Q And they were thus grouped by -- I guess for this
14 purpose, it's the pitch or frequency, right, the group of
15 medium-pitched tones, is that right?

16 A And a majority of these tones are grouped in that
17 manner.

18 Q And for the group of medium-pitched tones that
19 includes the Talk-Permit tone, do you know whether all of
20 those tones used the same frequency?

21 A I cannot at this point say.

22 Q You are presenting this to a user as a group of
23 tones that are related in terms of their pitch, is that
24 right?

25 A Yes, we are.

1 Q I think we talked earlier this morning about the
2 911 Hz products being trunking-based voice services for
3 which that particular type of availability, channel
4 availability message was appropriate, and I guess rather
5 than my saying that, I will take your limitation. That's
6 right. We are talking about trunked voice systems.

7 A Okay. Of competitors that operate on a trunked
8 voice system, there is E. F. Johnson, there is Macom, there
9 is Kenwood, there is Icom, there is Vertex; there is
10 probably going to be more competitors in the future, and
11 there is probably competitors in the past.

12 But of the ones that are primary competitors, I
13 believe it's those five.

14 Q And does each of those five sub products that
15 include a -- a Talk-Permit tone or a Call-Back tone?

16 A It would be my assumption that those products
17 would require some type of indication to notify the user
18 that take either the channel is available or that the mike
19 is active.

20 Q I think we talked before, but let's confirm it
21 here. Have you done any investigation to determine whether
22 any of the products of any of those five companies produce
23 a 911 Hz Tone?

24 A Currently we are investigating the audio and
25 other aspects of those devices. Due to the nature and

1 requirements of how you have to configure the products, we
2 are working through some details.

3 Right now we do not have elements that are
4 working, say, from Macom or Kenwood, or of these other
5 competitors that we do have.

6 Q I'm sorry, I don't understand your answer.

7 A The radio needs to be operating on a system such
8 that you have an opportunity to be in a situation where the
9 radio would generate that tone.

10 And currently we are working through some issues
11 to actually get the radio we do have up on a system so we
12 can validate the performance.

13 Q Okay. So you do have two-way radio devices from
14 those five manufacturers?

15 A We do.

16 Q And you are unable to perceive tones generated by
17 those products?

18 A Currently we are now focusing on that aspect.

19 Q And what is the purpose of your investigation of
20 those devices?

21 MR. WILLIAMS: Objection to the extent your answer
22 will require you to divulge communications between you and
23 your lawyers.

24 A We have spent time identifying the robustness of
25 the physical products. We are now evaluating the

1 performance of these products, and these would include any
2 tones it generates, response on a system, and overall radio
3 performance.

4 Q And that is yet to be accomplished as you have
5 said, correct?

6 A Correct.

7 Q And to your knowledge, has Motorola engaged in
8 any -- in an investigation of those performance
9 characteristics of competitors' two-way radios before now?

10 A It is an ongoing -- it is an ongoing process. We
11 have had previous products that we focus on the durability.

12 We are now trying to establish operational
13 performances. But we also have -- when working on user
14 systems that have a mix of products, we are -- they are
15 evaluating their performance.

16 Q Do these products have an array of features or
17 functionalities that would require them to have multiple
18 different tones as the 911 Hz Tone products we looked at
19 earlier today?

20 A It would be my assumption, and I would consider
21 this a reasonable assumption that it would generate
22 different tones.

23 We have certainly heard different tones not in a
24 trunked operation, but different tones come from the device.
25 So I think it would be a fine assumption to say that it

1 would produce multiple tones while operating in that mode.

2 Q How have you heard different tones coming from
3 the device?

4 A Powering the device on, entering menus,
5 interaction with the devices.

6 Q And how did you acquire those devices?

7 A Through purchase.

8 Q Is it possible then to purchase a device, one of
9 these two-way radio devices, without having them
10 operational?

11 A Can you clarify.

12 Q Well, you said that you are not able to make them
13 make the -- the call-back tone at this point, is that right?

14 A You can purchase a product that is not configured
15 to operate on a system such that you could observe its
16 performance on a trunk system.

17 They would still operate. You could make it
18 operate without any type of restriction in a unit-to-unit
19 perspective, but operation on a trunked system does require
20 security methods that are applied for configuration for a
21 particular system. That's done on the user's behalf for
22 security.

23 Q Okay. And the Talk-Permit tone and the Call-Back
24 tone are only accessible in a trunked operation mode, is
25 that right?

1 When you try again, if the channel is still
2 available, you will again hear your Talk-Permit tone. The
3 radio says here is -- I'm playing you this tone to tell you
4 that the microphone is available for you, please start
5 communicating.

6 Q In this situation at a trade show, when potential
7 customers were using the phone and they could hear the
8 Talk-Permit tone, was that always in connection with the
9 actual operation of the Talk-Permit function?

10 MR. WILLIAMS: Objection, that's vague.

11 A Yes.

12 BY MR. STEWART:

13 Q Let me ask it this way: When you push the button
14 and you heard the tone, that's because the -- the channel
15 function was working, is that right? The communication
16 channel open function was working?

17 A The Talk-Permit tone from its inception has
18 always indicated that when you hear this tone, you are being
19 told that either there is a channel available for you now,
20 or that the channel has been -- you know, essentially you
21 have the channel. The microphone is active. You can now
22 speak.

23 Q And were there times -- are there times, I'm
24 sorry, when the tone is heard and that's not the case?

25 A No. The tone is specific to -- the sound is

1 specific to those events.

2 Q Was the 911 Hz Tone -- I'm sorry.

3 Let me -- in the context you've described earlier
4 in which a sales rep would go to a customer facility, how
5 then would that work? How would the tone be demonstrated in
6 that context?

7 A There is a -- several different ways that that
8 could be established. The basics do not change. The radio
9 needs to be configured to operate on the system.

10 The sales individual can either work with the
11 customer to configure the radio on sites; the customer would
12 have the pertinent security method to insure the radio got
13 configured.

14 The sales individual could work with a support --
15 a staff support company. Not all companies service their
16 own products. They will have an outside company service
17 those products.

18 They could work with that service provider to
19 configure it appropriately and, then, work with the
20 customer.

21 As long as the configuration is completed
22 properly, operation will occur.

23 Q And in that context as well, is it the case that
24 when you hear the tone, it's because the channel open
25 function is working?

1 A Again, the tone has always been in reference to
2 either the call-back availability or of the microphone
3 active and communications occurring.

4 MR. STEWART: I would like to have marked as Klein
5 Exhibit 8 an advertisement that was provided to us in
6 discovery.

7 (Klein Deposition Exhibit
8 No. 8 was marked as
9 requested.)

10 A Okay.

11 BY MR. STEWART:

12 Q Do you recognize this document?

13 A I recognize it as the Astro XTS 3000
14 specification sheet. I have seen this document before.

15 Q Where have you seen it?

16 A In my daily job functions.

17 Q Is this something you provide to potential
18 customers?

19 A If requested, yes.

20 Q What is the purpose of it?

21 A This document, to the best of my understanding
22 and my use of this document, is to identify the form
23 factors, the overall form of the products, weights,
24 durability, ruggedness, frequency, supports, and high level
25 protocol supports of products.

1 publications. This was a document -- an informational
2 element that I have used, and I am familiar with others who
3 have used this at trade shows and also as customer
4 literature.

5 Q How do you use it at trade shows?

6 A When requests come in about the durableness of
7 the products and when they have keen interest in
8 significantly more robust products than our current lines
9 for ones that are submersible, marine patrol customers, as
10 such.

11 Q Can you tell me whether there is any mention made
12 of the 911 Hz Tone in this advertisement?

13 A No, there is not mention of any features that I
14 can tell from what I'm seeing, beyond the form factor
15 itself.

16 Q What do you mean when you say "form factor"?

17 A Large knobs set further apart, large push to talk
18 button, large uncramped keypad, large display, robustness,
19 submersibility, it's light, it's more visible.

20 Q Are you aware of any -- let's start with print
21 advertising -- used by Motorola with respect to 911 Hz
22 products that mentions the 911 Hz Tone?

23 A Print?

24 Q Yes.

25 A I'm not aware of any print advertisement that

1 explicitly states the 911 Hz Tone. Well, let me rephrase
2 that.

3 We say print, beyond -- you know, when you say
4 advertisements, this could be advertisements. Beyond the
5 manuals that it's printed in, beyond the training
6 information it's printed in, beyond those types of
7 discussion, direct discussion of the Talk-Permit tone, if
8 you are referring specifically to an ad in a magazine, I'm
9 not aware of an ad in a magazine that specifically states
10 the 911 tone.

11 Q Your reference to user manuals was to the kinds
12 of information we saw in Exhibits 3, 4 and 5, is that right?

13 MR. WILLIAMS: Let me get those for him,
14 please.

15 BY MR. STEWART:

16 Q Yes.

17 A I stipulated these manuals that reference the
18 Talk-Permit tone; also training information that references
19 the Talk-Permit tone, and other items.

20 Q I want to go one by one. The user manuals you
21 referred to are these -- are like these exhibits that we
22 reviewed previously, is that right?

23 A Yes.

24 Q And the references to the tones were the ones
25 that we looked at ourselves in looking at these user

1 sound of the Talk-Permit tone, and then that is either
2 singular solo training of the customers themselves, end
3 users, or there are trainers that work with the customers
4 and that material such that the same -- the same
5 functionality and the training of understanding the -- these
6 tones and their meanings are accomplished.

7 So there is a -- those are the -- in my
8 understanding, and I easily could be potentially missing out
9 some opportunities, but those are my understanding of the
10 different opportunities that we deliver and speak with a
11 customer directly about the tone.

12 Q And, first, when you are talking about live
13 trainers, a live trainer would use the tone for the purpose
14 of demonstrating the operation of the channel-open feature,
15 is that right?

16 A Correct.

17 Q Or function. With respect to the computer
18 training, we were handed this morning by counsel for
19 Motorola a box of documents that we hadn't seen before, plus
20 two CD-ROM discs which appear to include a video and a
21 PowerPoint training program of some sort.

22 Do you know that document?

23 A I am -- if it is what I think it is, I -- or the
24 training information I have seen in the past, I have some
25 familiarity with it. But I'm making an assumption that's

1 A It's a table that lists the Talk-Permit tone and,
2 then, a button that you press that it plays the tone.

3 Q And it's not a series of tones that you play for
4 your amusement and edification but, instead, an illustration
5 or demonstration of what it sounds like when you push the
6 Push-to-Talk button, is that right?

7 A Correct, I mean, it is specific to -- upon
8 pressing this icon or button, you hear specifically that
9 tone.

10 Q Okay. Now, has Motorola -- we talked first about
11 the print ads that might run in magazines, and you've talked
12 -- we have talked about those previously.

13 Has Motorola advertised 911 products in other
14 media other than print media?

15 A I am unaware of -- because we go through
16 procurement officers and things like that, the advertising
17 is focused to avenues of such customers.

18 So that would include the trade shows, the
19 promotions and interactive items.

20 I am not aware of any radio or TV ad that
21 specifies a 911 Hz Tone.

22 Q So you mentioned a list of ways in which
23 customers -- potential customers might hear the 911 Hz Tone
24 before -- and I'm going to list then for you here. One was
25 training?

1 A Uh hum.

2 Q One was mentioned in user guides?

3 A Uh hum.

4 Q A third --

5 MR. WILLIAMS: Say "yes" or "no".

6 A Yes.

7 BY MR. STEWART:

8 Q A third was heard at trade shows?

9 A Yes.

10 Q A fourth was a sales rep who demonstrates the
11 product at the customers's facilities?

12 A Yes.

13 Q And a fifth was in effect when you use the
14 product, it's got -- it makes the tone while at the same
15 time being labeled a Motorola product?

16 A Yes, it does.

17 Q Now, are there other ways in which potential
18 customers could have heard the 911 Hz Tone?

19 A Yes.

20 Q How?

21 A If a customer is in the field with another
22 customer of -- with overlapping coverage of systems, they
23 could easily be with somebody who utilizes their Motorola
24 radio, and they could easily hear the 911 Hz tone.

25 A significant number of customers would have

1 systems such that the police would be on one system,
2 potentially the fire could be on another, and there would be
3 numerous occasions where that tone would be played to people
4 who do not actually either carry a Motorola product or
5 operate on that system.

6 Q So they would hear it as it was being operated by
7 somebody who actually had already purchased the product?

8 A Yes, or who had authority. There are times
9 where, in times of crisis and need, Motorola does supply a
10 system, and we supply branded Motorola products to help out
11 in times of need.

12 And there would be a situation where they could
13 easily hear the tone as they are operating on those
14 products.

15 Q Okay. And is that different -- I had considered
16 those kinds of situations to be like the fifth example that
17 you gave me, which was, you use a Motorola phone, it's got
18 Motorola on it -- I'm sorry, not phone but radio. You use
19 it and it's got a Motorola label on it.

20 A Correct, they are -- they are very similar, the
21 distinction being whether the user actually -- it is their
22 product, or if they are actually observing somebody use it,
23 or if it's not their product, but they have been given this
24 Motorola radio to operate in a time of need.

25 Q Okay. Any other ways in which that would happen

1 -- in which a potential customer would hear the 911 Hz
2 Tone?

3 A To the best of my knowledge, beyond -- and just
4 for clarification, on the trade shows, they are trade shows
5 that are open, or they are Motorola sponsored trade shows
6 where we go out and visit customers or groups of customers
7 to exhibit our products.

8 To the best of my knowledge, that I can recall, I
9 believe those are the -- those are the instances where a
10 customer would hear that 911 Hz Tone.

11 MR. STEWART: I would like to have marked as
12 Exhibit 12, Applicant's Response to Opposer's First Set of
13 Interrogatories to Applicant.

14 (Klein Deposition Exhibit
15 No. 12 was marked as
16 requested.)

17 A Okay.

18 BY MR. STEWART:

19 Q Have you seen this document before?

20 A I have seen this document before.

21 Q I would like you just to turn to page seven and
22 look at the response to Interrogatory Number 14 which goes
23 over onto page nine.

24 A Okay.

25 Q Did you assist in producing this list of trade

1 those fall into the category of enterprise customers?

2 A By the description of DistribuTECH,
3 TechAdvantage, some of those, I'm going to draw the
4 conclusion that they are -- they are enterprise based
5 customers.

6 MDUG is our Data Users Group which I have some
7 working familiarity with.

8 Some of these other items that are -- Navy, Army,
9 and some other elements such as those, I know that we do
10 have interactions with them from a federal -- federal
11 discussion and federal trade shows, but I have not worked
12 with those organizations.

13 The ones that define themselves as APCO or MTUG,
14 Print Track, and any of the Motorola specific meetings,
15 these are all ones that I have working familiarity with.

16 Q Now, at any of those trade shows, are you aware
17 of any instance in which Motorola featured the 911 Hz Tone
18 other than in connection with the operation of the function
19 that it signifies?

20 A I'm not aware of any other -- any other
21 presentation of that tone.

22 Q Now, are 911 Hz Tone products offered for sale
23 through other channels of trade such as retail or mail or
24 Internet?

25 A It is my understanding that to purchase a new

Opposer's Exhibit 5



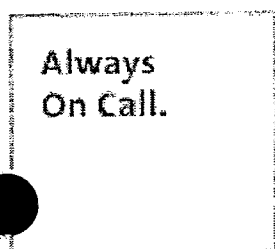
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NEXTEL



Public Safety Services

Rely on Nextel for strong and reliable communications capabilities - whether during day-to-day operations or an emergency.

Nextel can help you enhance field communications with these exclusive services:

Emergency communication resources when you need them.

Nextel's Emergency Response Team provides Rapid Deployment Services, such as Nextel equipment, services and support in the following situations:

Disaster Support: Provides wireless equipment and services to emergency and disaster recovery personnel during declared emergencies in both urban and rural environments.

Field Training Support: Provides daily use of wireless equipment and services for short-term needs such as training and field exercises.

Agency Specific Event Support: Provides a single agency's narrow requirements for wireless equipment and service to support limited-duration events.

Mobile Cellular Sites, Portable Microwave Facilities and Ruggedized Handsets: Provides customers' existing systems with a secure and stable communications platform that is interoperable with other private radio networks.

Agency Service Center Training: Gives you the capability to service and repair phones by adding to the skills of your current staff.

Get priority access during times of network congestion.

Priority Connect. This service puts your Nextel® Walkie-Talkie call ahead of others, increasing the likelihood of getting connected during times of network congestion.

Priority preemptive access to network resources.

Enjoy Nextel® Emergency Group Walkie-Talkie, an advanced feature that will preempt other network traffic, thus enabling you to contact everyone on your team at once (only available on the i325 IS).

24 X 7 Tier 2 support. 365 days a year.

Premium Public Safety Care. One toll-free call and you can speak with a

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Special Public Safety Handsets.

Nextel offers several phone models specifically designed to meet the needs of challenging work environments. From the durable i530 and rain resistant i305 to the GPS-enabled i58sr, these phones keep going even when the going gets tough.

For the most physically demanding environments, Nextel offers the i325 IS, which meets military standard 810 C/D/E for resistance to vibration, mechanical shock, rain, and dust. The i325 IS is equipped with the red Nextel® Emergency Group Walkie-Talkie button, an exclusive service for public safety agencies. It also features a fixed antenna, rubber-molded grips and speakerphone.

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Opposer's Exhibit 6

**UNITED STATES PATENT AND TRADEMARK OFFICE
TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)	
)	
Opposer,)	
)	
v.	)	Opp. No.: 91161817
	)	App. No.: 78/235,618
MOTOROLA, INC.,	)	Mark: Sensory Mark
	)	(911 Hz tone)
)	
Applicant.)	
)	

**APPLICANT'S RESPONSE TO OPPOSER'S
FIRST SET OF INTERROGATORIES TO APPLICANT**

Applicant responds to Opposer's First Set of Interrogatories to Applicant as follows.

The "General Objections" set forth in Applicant's Response to Opposer's First Request of Applicant for Production of Documents and Things are incorporated herein by reference.

INTERROGATORIES

INTERROGATORY NO. 1:

Identify each related entity (including subsidiaries, parent companies, and other related companies) of Opposer that sells products or offers services that feature or are associated with the 911 Hz Tone.

RESPONSE TO NO. 1:

Subject to the General Objections set forth above, Applicant is unaware of any related entity of Opposer that sells products or offers services that feature or are associated with the 911 Hz Tone.

INTERROGATORY NO. 2:

Identify the person(s) with knowledge of the selection and adoption, and integration into Applicant's business of the 911 Hz Tone (past and present), and identify all documents that relate to such selection, adoption, and integration of the 911 Hz Tone.

RESPONSE TO NO. 2:

Subject to the General Objections set forth above, Applicant is presently unable to identify the requested person(s) because of the length of time that has passed since Applicant first selected, adopted, and integrated the Tone into Applicant's business. Also subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 3:

Identify all documents relating to surveys, research reports, clearance reports, or other evaluations obtained or performed by Applicant, its agents, and third parties with regard to the 911 Hz Tone.

RESPONSE TO NO. 3:

Subject to the General Objections set forth above and subject to the specific objection that the term "other evaluations" is vague and ambiguous, Applicant will produce business records that are responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P., although no surveys or clearance reports exist.

INTERROGATORY NO. 4:

Describe in detail the meaning and significance of the 911 Hz Tone (including the selection of the frequency and the timing of the components of the same) with respect to Applicant's products, and identify all documents relating to same said meaning and significance.

RESPONSE TO NO. 4:

Subject to the General Objections set forth above, the 911 Hz Tone has no meaning or significance apart from signifying the source of Applicant's goods/services. Also subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 5:

Describe in detail the manner in which the 911 Hz Tone is or has been affixed to any goods (including the 911 Hz Tone Products), and identify all documents that evidence said affixation.

RESPONSE TO NO. 5:

The 911 Hz Tone is affixed to Motorola's two-way radios and cellular telephones through an electronic chip resident in the device and from which the sound originates and emanates. Also subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 6:

Describe in detail the manner in which Applicant purports to use or have used the 911 Hz Tone in commerce, and identify all documents that evidence said use.

RESPONSE TO NO. 6:

Subject to the General Objections set forth above, Applicant has used the 911 Hz Tone in commerce by, among other things, offering to sell and selling two-way radios and cellular telephones that contain the chip referred to above (*see* Response to No. 5) and from which the Tone can be heard. Also subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 7:

Describe in detail how the 911 Hz Tone purportedly is used or has been used to promote the 911 Hz Tone Products to customers (including the dates of said promotions), and identify all documents that evidence said promotions.

RESPONSE TO NO. 7:

Subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 8:

Identify all instances (by media form, title, date(s), page(s), issue(s), and such other identifying information as used by Applicant) in which Applicant advertised, advertises, or plans to advertise, promoted, promotes, or plans to promote the 911 Hz Tone Products in commerce.

RESPONSE TO NO. 8:

Subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 9:

State the respective dollar amounts Applicant has expended, by year, in connection with the promotion and advertising of the 911 Hz Tone Products in each medium identified in response to the preceding Interrogatory and by all other means not so identified, and identify all documents that evidence said expenditures.

RESPONSE TO NO. 9:

Subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 10:

Identify all instances (by media form, title, date(s), page(s), issue(s), and such other identifying information as used by Applicant) in which Applicant advertised, advertises, or plans to advertise, promoted, promotes, or plans to promote, used, uses, or plans to use the 911 Hz Tone in commerce.

RESPONSE TO NO. 10:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as being duplicative of Interrogatory No. 8, and Applicant incorporates herein its Response to No. 8.

INTERROGATORY NO. 11:

State the respective dollar amounts Applicant has expended, by year, in connection with promotions and advertising featuring the 911 Hz Tone in the promotion and advertising of the 911 Hz Tone Products in each medium identified in response to the preceding Interrogatory and by all other means not so identified, and identify all documents that evidence said expenditures.

RESPONSE TO NO. 11:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as being duplicative of Interrogatory No. 9, and Applicant incorporates herein its Response to No. 9.

INTERROGATORY NO. 12:

Identify, by product or model name and number or any other identifying information used by you, each product that has incorporated, incorporates or will incorporate the 911 Hz tone.

RESPONSE TO NO. 12:

Subject to the General Objections set forth above, Applicant identifies the following models:

MTS 2000	XTS3000	M500J	MTX Classic 800/900 PP
MTX8000	LTS 2000	Maxtrac PP 800,900 U.V.	MTX 8000/9000 PP
MTX 9000	LCS 2000	Maxtrac LS LTR	MTX LS
MTX838	XTS 5000	Maxtrac Duplex	STX
Visar	XTS 2500	Spectra PP	VISAR PP
MCS2000	XTS 1500	Coverage+ (Simplex)	GTX PP
ASTRO Saber	XTL 1500	Coverage+ (Duplex)	GTX LS
ASTRO Spectra		GTX PP	P1225 LS
		GTX LS LTR	HT1250 LS
		M1225 LS UHF	HT750 LS UHF
		CDM 1550 LS	CT450 LS UHF
		CDM 1550 LS+ UHF	MTX150 PP (PRO5650)
		CDM 1550 LS+ 200	MTX450.MTX4500 PP

CDM 1550 LS+ 700

MTX8250.MTX850 LS
MTX8250.MTX 850 PP
MTX9250.MTX950 PP
HT1250 LS+ UHF
HT1250 LS+ 200
HT1250 LS+ 700

INTERROGATORY NO. 13:

Identify all of Applicant's annual sales information (including model number and customers) for all products incorporating the 911 Hz Tone (including the 911 Hz Tone Products) in the United States since the purported date of first use of the 911 Hz Tone, and identify all documents that reflect such sales.

RESPONSE TO NO. 13:

Subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 14:

Identify all trade shows where Applicant has used the 911 Hz Tone for each of the past five (5) years, and identify all documents relating to said use.

RESPONSE TO NO. 14:

Subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P., and identifies the following trade shows:

DistribuTECH 2005

AFCEA West

Major City Chiefs

TechAdvantage 2004 (NRECA)

NACO's Legislative Conference
State & Provincial Conference
National Postal Forum
Navy League - Sea Air Space
FOSE
IWCE
NFBPA
FDIC
ENTELEC
PTI
North Central Regional APCO
East Coast Regional APCO
Metropolitan Fire Chiefs Conference
ACFEA International
UTC
UTC-regional
LEIM - IACP
RSSI (Railway Systems Suppliers Inc.)
MDUG
NENA
NSA
NACo
NOBLE Annual Conference
IAFC
NCSL
APCO
AFCEA Army DOIM
NASTD
NGAUS

AMRA
IACP
ICMA
Printrak Users Conference
AUSA Annual MTG
Canadian APCO
NASCIO formerly NASIRE
HAPCOA
Printrak Users Conference
AFCEA TechNet AsiaPac
CE & IESS Supplier Conference (CE)
Financial Analyst Meeting
Motorola Officers' Business Meeting
Shareholder Meeting
NOBLE / CEO Symposium, and
West Cost Regional APCO.

INTERROGATORY NO. 15:

Describe in detail the means by which Applicant or its distributors or agents have offered, are offering, or will offer to sell 911 Hz Tone Products, and identify all documents relating to said attempts.

RESPONSE TO NO. 15:

Subject to the General Objections set forth above, Applicant responds that the 911 Hz Tone Products are sold through a direct sales force to the end-user/customer and through dealers' or manufacturer's representatives. Also, subject to the General Objections set forth above, Applicant will produce business records responsive to this Interrogatory, in accordance with Rule 33(d), Fed. R. Civ. P.

INTERROGATORY NO. 22:

Identify all instances of actual confusion relating to the 911 Hz tone.

RESPONSE TO NO. 22:

Subject to the General Objections set forth above, none.

INTERROGATORY NO. 23:

Identify all persons who participated in any way in the preparation of the answers or responses to these interrogatories separately by interrogatory, and state specifically with reference to interrogatory number the area of participation of each such person.

RESPONSE TO NO. 23:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as it invades the attorney-client privilege and the work product immunity doctrine.

INTERROGATORY NO. 24:

Identify each person whom Applicant expects or intends to call as a witness to present evidence in the above-captioned opposition proceeding (including expert witnesses).

RESPONSE TO NO. 24:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as being premature.

INTERROGATORY NO. 25:

What do you contend are the facts and the law as applied to the facts that support the allegations in your answer to Paragraph 9 of the Notice of Opposition?

RESPONSE TO NO. 25:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as it invades the work product immunity doctrine.

INTERROGATORY NO. 26:

What do you contend are the facts and the law as applied to the facts that support the allegations in your answer to Paragraph 10 of the Notice of Opposition?

RESPONSE TO NO. 26:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as it invades the work product immunity doctrine.

INTERROGATORY NO. 27:

What do you contend are the facts and the law as applied to the facts that support the allegations in your answer to Paragraph 11 of the Notice of Opposition?

RESPONSE TO NO. 27:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as it invades the work product immunity doctrine.

INTERROGATORY NO. 28:

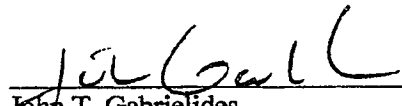
What are the facts and the law as applied to the facts that you contend support each affirmative defense you allege in your answer to the Notice of Opposition?

RESPONSE TO NO. 28:

In addition to the General Objections set forth above, Applicant objects to this Interrogatory as it invades the work product immunity doctrine.

As to objections:

Dated: April 12, 2005



John T. Gabrielides
Elisa M. Valenzona
BRINKS HOFER GILSON & LIONE
455 N. Cityfront Plaza Drive, Suite 3600
Chicago, Illinois 60611-5599
Telephone: (312) 321-4200
Facsimile: (312) 321-4299

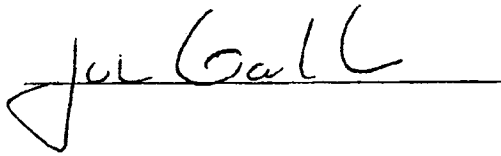
Attorneys for Applicant

CERTIFICATE OF SERVICE

I hereby certify that a true copy of APPLICANT'S RESPONSE TO OPPOSER'S
FIRST SET OF INTERROGATORIES TO APPLICANT was served on counsel for Opposer
on April 12, 2005, by sending same via First Class Mail, postage prepaid, and via email to:

Michael H. Jacobs
Crowell & Moring LLP
1001 Pennsylvania Avenue, N.W.
Washington D.C. 20004

mjacobs@crowell.com

A handwritten signature in dark ink, appearing to read "Julie Gall", is written over a horizontal line.

Opposer's Exhibit 7

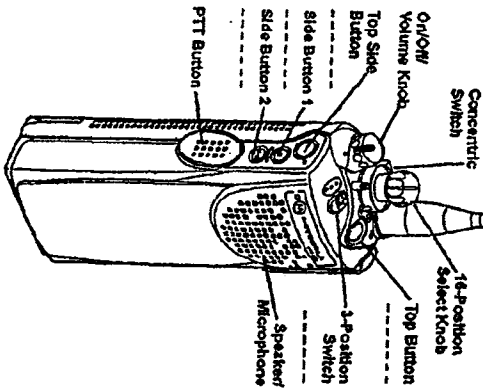


XTS™ 3000 ASTRO®
Digital Portable Radio
Model I
User Guide

MOT 002203
ATTORNEYS' EYES ONLY

ASTRO XTS 3000 **Model 1 Digital** **Portable Radio**

Quick-Reference Card



Write your radio's programmed features on the dotted line.

GENERAL

Turning the Radio On: Rotate the On/Off Volume Control Knob clockwise.

Monitoring (Conventional Channels Only): Momentarily press the preprogrammed Monitor button and listen for voice activity.

Transmitting: Press and hold the PTT button.

Receiving: Release the PTT button.

Selecting a Zone and Channel:

1 Place the preprogrammed Zone switch to the desired position.

If you would like a different channel than the presently selected channel:

2 Rotate the Zone/Channel Select knob to the desired channel; then go to step 7.

3 Press the PTT button to talk and release it to listen.

COMMON RADIO FEATURE

Answering an Individual Call

1 For telephone calls, press the preprogrammed Call Response button.

OR

For Private-conversation Calls and Call-Alert Pages with Private-Conversation, within 20 seconds, press the PTT button to talk privately.

For Selective Call after 2 seconds, the speaker will unmutate.

OR

For Call-Alert Pages Only - To respond, press the PTT button. Your conversation will be heard by the entire talkgroup.

2 Press the PTT button to talk and release it to listen.

3 To disconnect when you have finished your conversation, press the Call Response button.

COMMON and SPECIAL RADIO FEATURES

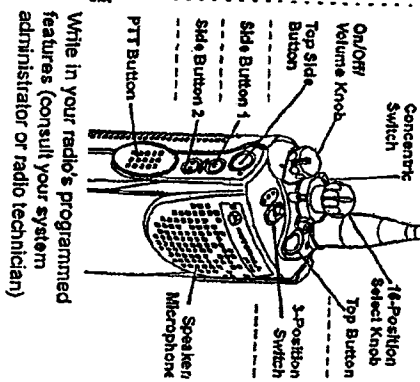
Most of your radio features can be accessed by performing the following step (for more detail, refer to the feature description in your manual).

- 1 Press (or rotate) the Feature button/switch (if programmed).

LED Description

Indicates the radio's operating status:

- Red = Transmitting
- Blinking Red = Channel busy or low battery
- Blinking Green = Receipt of individual call



Write in your radio's programmed features (consult your system administrator or radio technician)

Notes



XTS™ 3000 ASTRO®
Digital Portable Radio
Model I User Guide

Motorola, Inc.
8000 West Sunrise Blvd.
Ft. Lauderdale, FL 33322

6881083C70-A

MOT 002206
ATTORNEYS' EYES ONLY

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Introduction

This manual describes how to operate your XTS™ 3000 ASTRO® Type III Model I Digital Portable Radio.

This manual discusses the following:

- General Radio Operation
- Common Radio Features
- Special Radio Features
- Helpful Tips

Use this manual to become familiar with your XTS 3000 ASTRO radio.

Notations Used in This Manual

Throughout the text in this publication, you will notice the use of **WARNINGS**, **Cautions**, and **Notes**. These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.



WARNING

An operational procedure, practice, or condition, etc., which may result in injury or death if not carefully observed.



Caution

An operational procedure, practice, or condition, etc., which may result in damage to the equipment if not carefully observed.

Note:

An operational procedure, practice, or condition, etc., which is essential to emphasize.

Introduction

The following special notations identify certain items:

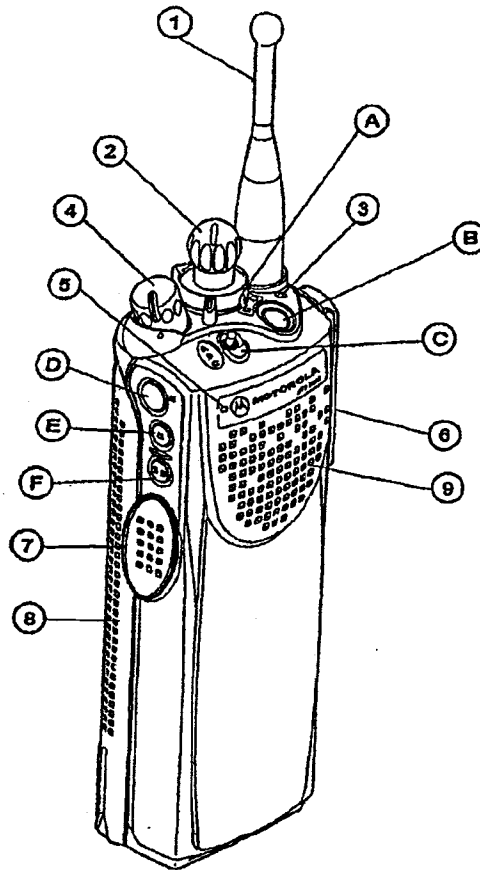
<i>Example</i>	<i>Description</i>
Light button	Button names are shown in bold print.

APCO Project 25 Radios

XTS 3000 ASTRO digital radios are part of Motorola's Project 25 digital solution. When a radio is equipped with the ASTRO Digital CAI option, it complies with APCO Project 25 standards on conventional two-way radio systems and Common Air Interface (CAI) on digital trunked systems. Not only does the ASTRO Digital CAI option include Project 25 interoperable voice features, but other Project 25 compliant advanced digital signalling capabilities as well.

APCO Project 25 is the creation of the Association of Public Safety Communication Officers (APCO). It brings together representatives of various user groups to evaluate basic technologies in advanced land mobile radios to find common solutions to best serve the marketplace.

Your XTS 3000 ASTRO Model I Radio



Note: Physical features are denoted by number (see Table 2 on page 4). Programmable controls are denoted by alphabet lettering (see Table 2 on page 4).

XTS 3000 ASTRO Model I

3

MOT 002212
ATTORNEYS' EYES ONLY

Introduction

Physical Features of the XTS 3000 ASTRO Model I Radio

Table 1: Physical Features

No.	Feature	Page	No.	Feature	Page
1	Antenna	11	6	Universal Connector Cover	16
2	16-Position Select Knob	23	7	PTT (Push-to-Talk) Button	22
3	LED	5	8	Battery	9
4	On/Off/Volume Control Knob	21	9	Speaker	
5	Microphone				

Programmable Controls

The following radio controls can be programmed to activate certain software features.

Table 2: Programmable Controls

No.	Feature	No.	Feature
A	2-Position Concentric Switch	D	Top Side (Select) Button
B	Orange Top Button	E	Side Button 1
C	3-Position A/B/C Switch	F	Side Button 2

The features that can be assigned to these controls by a qualified radio technician, and the pages where these features can be found are listed in Table 3 on page 5.

Note: Any references in this manual to controls that are preprogrammed mean that a qualified radio technician must use the radio's programming software to assign a feature to a control. Contact your system administrator for details.

Table 3: Programmable Features

Feature	Page	Feature	Page	Feature	Page
Call Response	32	Nuisance Delete	35	Site Lock/Unlock	44
Channel	23	PL Defeat	33	Site Search	45
Dynamic Priority	38	Repeater/Direct	33	Volume Set	23
Emergency	28	Reprogram Request	40	Zone	22
Light/Backlight	5	Scan On/Off	35		
Monitor	23	Secure/Clear	41		

Backlight

If poor light conditions make the channel numbers (around the 16-Position Select knob) difficult to read, turn on the radio's backlight by pressing the preprogrammed Light button if applicable.

These lights remain on for a preprogrammed time before they turn off automatically, or you can turn them off immediately by pressing the Light button again.

LED Indicators

The LED on top of the radio indicates the radio's operating status:

Table 4: LED Indicators

LED Indicator	What It Means
Red	Radio transmitting
Flashing red	Channel busy, or Low battery (while transmitting)
Double flashing red	Receiving encrypted audio
Flashing green	Receiving an individual call

Introduction

Alert Tones

An alert tone is a sound or group of sounds. Your radio uses alert tones to inform you of your radio's conditions. The following table lists these tones and when they occur.

<i>Sound</i>	<i>Tone Name</i>	<i>Occurs:</i>
Short, Low-Pitched Tone	Invalid Key-Press	When the wrong key is pressed.
	Radio Self-Test Fail	When the radio fails its power-up self test.
	No ACK Received	When the radio fails to receive an acknowledgement from the dispatcher.
	Reject	When an unauthorized request is made.
	Time-Out Timer Warning	Four seconds before time out.
Continuous, Low-Pitched Tone	Time-Out Timer Timed Out	After time out.
	Talk Prohibit/PTT Inhibit	When the PTT button is pressed and transmissions are not allowed.
	Out-of-Range	When the PTT button is pressed and the radio is out of range of the system.
	Invalid Mode	When the radio is on a channel that is not programmed.
	Individual Call Warning Tone	When the radio is in an individual call for greater than six seconds without any activity.
A Group of Low-Pitched Tones (Busy Tone)	Busy	When a channel, phone line, or system is unavailable due to high traffic volume.

Introduction

Sound	Tone Name	Occurs:
Short, Medium-Pitched Tone	Valid Key-Press	When the correct key is pressed.
	Radio Self-Test Pass	When radio passes its power-up self test.
	Clear Voice	At the beginning of a non-coded communication.
	Priority Channel Received	Upon receipt of activity on a priority channel.
	Emergency Alarm Entry	Upon entering emergency state.
	Central Echo	When the central controller has received a request from a radio.
Continuous, Medium-Pitched Tone	Volume Set	Sounds when volume level is adjusted on a quiet channel.
	Emergency Exit	Upon exiting emergency state
	PTT Sidetone	When data is sent by pressing the PTT button, but the user must wait to talk.

Introduction

<i>Sound</i>	<i>Tone Name</i>	<i>Occurs:</i>
<i>A Group of Medium-Pitched Tones</i>	Failsoft	When system fails.
	Automatic Call Back	When voice channel becomes available in response to a previous request.
	Talk Permit	Upon pressing the PTT button; verifying system accepting transmissions.
	Dispatcher-Interrupter	Upon receipt of a dispatcher-interrupt call.
	Keyfail	When an encryption key has been lost.
	Console Acknowledge	When a status, message, emergency alarm, or reprogram request ACK is received.
	Received Individual Call	When a Call Alert or Private Conversation call is received.
	Call Alert Sent	When a Call Alert is received by the target radio.
<i>Short, High-Pitched Tone (Chirp)</i>	Low-Battery Chirp	When battery level is below preset threshold value
	Phone Dekey Chirp	When switching from radio to phone line upon releasing the PTT button.
<i>Continuous, High-Pitched Tone</i>	Quik-Call™ Group Call	When a Quik-Call group call is received
<i>A Group of High-Pitched Tones</i>	Quik-Call Individual Call	When a Quik-Call individual call is received
<i>Ringling</i>	Phone Ringing	When a phone call is received
	Enhanced Call Received	When originator receives ACK from an enhanced private call
<i>Gurgle</i>	Dynamic Regrouping/Over-The-Air Programming	When a dynamic ID has been received and the PTT button is pressed and the reprogrammed group has not been selected and when the radio is successfully re-keyed

Standard Accessories

Battery



WARNING

To avoid a possible explosion:

- **DO NOT** replace the battery in any area labeled "hazardous atmosphere."
- **DO NOT** discard batteries in a fire.



Caution

If your radio is programmed with volatile-key retention (consult your service technician), encryption keys are retained for approximately 30 seconds after battery removal.

Battery Life

Battery life is determined by several factors. Among the more critical are the regular overcharge of batteries and the average depth of discharge with each cycle. Typically, the greater the overcharge and the deeper the average discharge, the fewer cycles a battery will last. For example, a battery which is overcharged and discharged 100% several times a day, lasts fewer cycles than a battery that receives less of an overcharge and is discharged to 50% per day. Further, a battery which receives minimal overcharging and averages only 25% discharge, lasts even longer.



WARNING

Care should be taken to avoid external short circuiting of the battery. A sustained high-rate discharge (for example, a paper clip placed accidentally across the battery contacts) may permanently damage the battery, void the battery warranty, and create a burn or fire hazard.

Introduction

Charging the Battery

Motorola batteries are designed specifically to be used with a Motorola charger and vice versa. Charging in non-Motorola equipment may lead to battery damage and void the battery warranty.

The battery should be at about 77°F (25°C) (room temperature), whenever possible. Charging a cold battery (below 50° F (10°C)) may result in leakage of electrolyte and ultimately in failure of the battery. Charging a hot battery (above 95°F (35°C)) results in reduced discharge capacity, affecting the performance of the radio. Motorola rapid-rate battery chargers contain a temperature-sensing circuit to ensure that batteries are charged within the temperature limits stated above.



WARNING

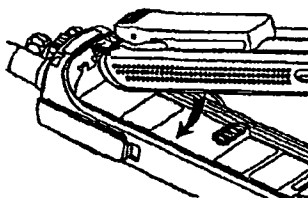
Do not attempt to change or charge the battery in a hazardous atmosphere.

To charge the battery, place the battery (with or without the radio) in a Motorola-approved charger. The charger's LED indicates the charging progress; see your charger user guide for details.

Attach the Battery

To attach the battery:

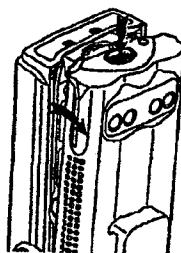
- 1 Turn off the radio and hold it with the back of the radio facing upward.
- 2 Align the three slots at the top of the battery with the three tabs on the back of the radio.
- 3 Push the battery down toward the radio until the battery clicks into place.



Remove the Battery

To remove the battery:

- 1 Turn the radio off.
- 2 Hold the radio with the back of the radio facing upward.
- 3 To release the battery from the radio, push the battery release button located on the bottom of the battery.
- 4 Lift the battery away from the radio and remove.



Note: If your radio is programmed with volatile-key retention, encryption keys are retained for approximately 30 seconds after battery removal. Consult a qualified radio technician for details.

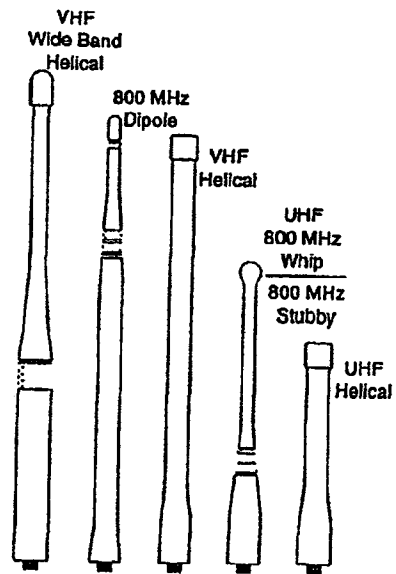
Antenna**Radio Operating Frequencies**

Before installing the antenna, ensure that the antenna you have can be used with your radio. Your radio's model number is on a label attached to the back of your radio. A typical model number might be H09UCC9PW5AN. The fourth position of the model number (in this example, U) identifies the operating-frequency band of the radio. The following table lists all fourth-position alpha characters and corresponding frequency band.

<i>Radio Operating-Frequency Table</i>			
Fourth Position	Operating Frequency	Fourth Position	Operating Frequency
K	136-178MHz	R	403-470MHz
S	450-512MHz	U	806-870MHz

Introduction

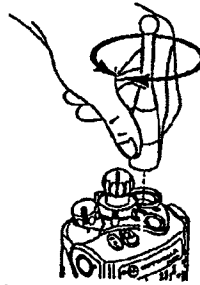
Antennas are frequency sensitive and are color coded according to the frequency range of the antenna. The color code indicator is in the center of the base of the antenna. The following illustrations and table helps identify the antenna, antenna frequency range, and corresponding color code.



Introduction

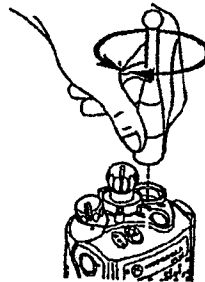
Attach the Antenna

With the radio turned off, turn the antenna clockwise to attach it to the radio.



Remove the Antenna

With the radio turned off, turn the antenna counter-clockwise to remove it from the radio.

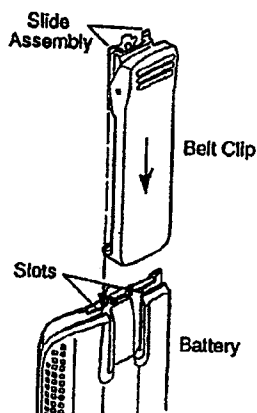


Belt Clip

Note: The battery must be removed from the radio before the belt clip can be installed or removed.

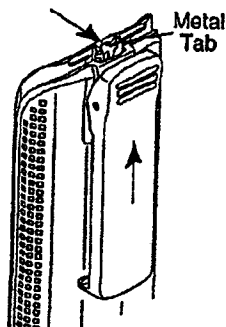
Attach the Belt Clip

- 1 Holding the battery in one hand so that the top of the battery faces upward and the back of the battery faces you, hold the belt clip in the other hand with its top facing upward.
- 2 Align the slide assembly on the front of the belt clip with the slots on the back of the battery. Slide the belt clip downward toward the bottom of the battery until the belt clip clicks in place.



Remove the Belt Clip

- 1 Hold the battery in one hand so that the top of the battery faces upward, and the front (radio side) of the battery faces you.
- 2 At the top of the battery, press down on the belt clip's metal tab and slide the belt clip upward. Continue to slide the belt clip upward until it is free from the battery.



Introduction

Universal Connector Cover

The universal connector is located on the antenna side of the radio. It is used to connect accessories to the radio.

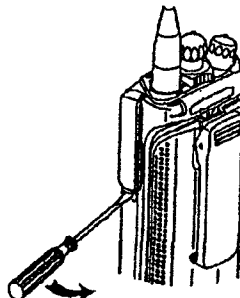
Remove the Connector Cover



Caution

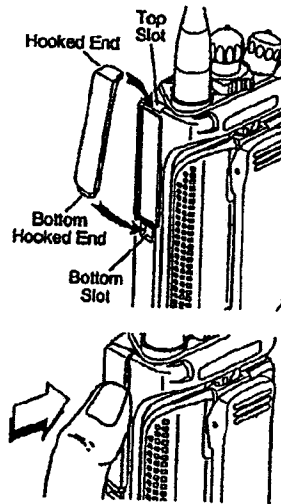
When the Universal Connector is not in use, keep it covered with the Universal Connector cover to prevent damage.

- 1 Turn the radio off.
- 2 While holding the cover's top (flat) end in place with your thumb, pry upward on the cover's lower end until it disengages from the radio.



Attach the Connector Cover

- 1 Turn the radio off.
- 2 Insert the top, hooked end of the cover into the top of the connector slot.
- 3 While holding the top end, swing the rounded end into place at the bottom of the connector. Press firmly until it snaps into place.



Introduction

XTS 3000 R Radios Only

Note: In XTS 3000 R radios, the "R" signifies the radio is a Rugged-type radio designed to withstand adverse field conditions such as being submersed in water..



Caution

- The XTS 3000 R radio casting has a vent hole that allows for pressure equalization in the radio. Never poke this vent with any objects, such as needles, tweezers or screwdrivers. This creates a leak path into the radio and the radio's submersibility is lost.
- The pressure equalization vent is located on the chassis, just below the battery contact. Never obstruct or cover the two slots with any object, including a label. Ensure that no oily substances come in contact with this vent.
- The XTS 3000 R radio is designed to be submersed to a maximum depth of 6 feet and a maximum submersion time of 4 hours. Exceeding either maximum limit may result in damage to the radio.

Note:

- 1 If the radio has been submersed in water, shake the radio well to remove any water that may be trapped inside the speaker grille and microphone port. Otherwise, the water could cause decreased audio capabilities.
- 2 If the radio's battery contact area has been exposed to water, dry the battery contacts (both on the radio and the battery) before attaching the battery to the radio. Otherwise, the water could short-circuit the radio.
- 3 If the radio has been submersed in a corrosive medium (such as salt water), rinse the radio and battery in fresh water and dry the radio and battery.
- 4 To clean the exterior surfaces of the radio, use a diluted solution of mild dish washing detergent and fresh water (one teaspoon of detergent to one gallon of water).

- 5 Do not disassemble the radio. This could damage radio seals and result in leak paths into the radio. Radio maintenance should be performed only by a qualified service person.
- 6 Elastomer technology materials used for seals in rugged portable radios can age with time and environmental exposure. Therefore, Motorola recommends that rugged radios be checked annually to assure the water-tight integrity of the radio. Radio disassembly and reassembly procedures and information regarding test equipment necessary to inspect, maintain and troubleshoot radio seals can be found in the XTS 3000 ASTRO Basic Service manual.

Introduction

Notes

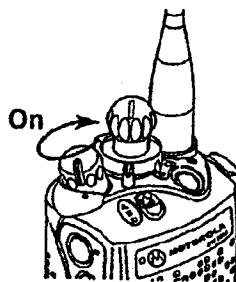
General Radio Operation

Your radio is ready for use once a fully-charged battery and antenna have been connected to the radio. Refer to page 3 to ensure a complete understanding of the radio's controls and indicators. If necessary, review the "Additional Information" section starting on page 47.

Turning the Radio On and Off

Turn the Radio On

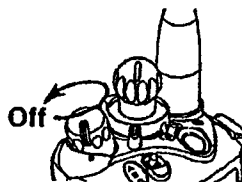
Turn the On/Off/Volume Control knob *clockwise*. The radio performs a power-up self test. When the radio passes the self test, a medium-pitched tone sounds. This tone is programmable by your system manager or radio technician using radio service software from Motorola.



If the radio fails the self test, you hear a low-pitched tone. Turn off the radio, check the battery, and turn the radio on. If the radio fails the power-up test again, contact your system administrator or an authorized radio technician.

Turn the Radio Off

Turn the On/Off/Volume Control knob *counterclockwise* until you hear a click.



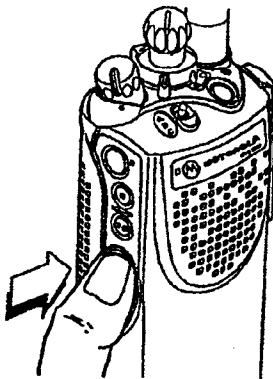
Zones and Channels

A zone is a grouping of channels. A channel is a group of radio characteristics such as transmit/receive frequency pairs. After you turn your radio on, select the desired zone and channel.

Select a Zone

Place the preprogrammed Zone switch (see page 4) in the desired position.

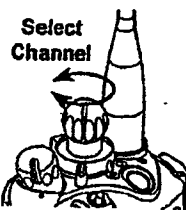
To transmit on the displayed zone/channel combination, press the PTT button.



Note: If the selected zone is not programmed, the you hear a continuous, low-pitched tone (invalid-mode tone) until a valid programmed zone is selected. This does not mean your radio is not programmed; only that the zone you selected is not programmed.

Select a Channel

Rotate the preprogrammed 16-Position Select knob to the desired channel.



Note: If the selected channel is not programmed, you hear an continuous, low-pitched tone (invalid-mode tone) until a valid programmed channel is selected. This does not mean your radio is not programmed; only that the channel you selected is not programmed.

To transmit on the displayed zone/channel combination, press the PTT button.

Transmitting and Receiving

Note: Radio users who switch from analog to digital radios often assume that the lack of static on a digital channel is an indication that the radio is not working properly. This is not the case. Digital technology quiets the transmission by removing the noise from the signal and allowing only the clear voice or data information to be heard.

This section emphasizes the importance of knowing how to monitor a channel for traffic before keying up to send a transmission.

- 1 Turn the radio on and select the desired zone and channel.
- 2 To hear the volume set tone, press and hold the preprogrammed Volume Set button (see page 4).
- 3 Press the preprogrammed Monitor button (see page 4) to listen for activity. See notes below.
- 4 Adjust the Volume Control knob if necessary.

General Radio Operation

- 5 To transmit, press and hold the PTT button and release it to listen. The LED lights RED while transmitting.

Note: If the channel on which you are transmitting is programmed to receive Private-Line® (PL), ensure that the channel is not in use by momentarily pressing the preprogrammed Monitor button (see page 4) to listen for activity. To put the radio in permanent monitor operation (squelch defeat), press and hold the preprogrammed Monitor button for five seconds (programmed by your system administrator or radio technician). To return the radio to its original squelch state, tap the Monitor button again or press the PTT button.

If you try to transmit on a channel that is programmed for receive only, an invalid tone sounds until you release the PTT button.

General Radio Features

Time-Out Timer

The new ASTRO portable radio is equipped with a programmable time-out timer which, upon expiration, turns off the transmitter. This timer is programmable by your system manager or service technician and can be set from 0 seconds (off) to 7.75 minutes (465 seconds), at 15-second increments. ASTRO radios have been programmed at shipment with a default time-out timer duration of 60 seconds.

A time-out timer warning occurs approximately four seconds before the allocated time-out timer expires. The warning is a short, low-pitched tone.

If the PTT button is held down longer than the time-out timer's allotted time, a continuous, low-pitched tone sounds and the LED stops lighting red, indicating that your transmission has been cut off. This tone continues to sound until the PTT button is released.

- 1 Release the PTT button to silence the warning.
- 2 To transmit another message, press the PTT button.

Low-Battery Indication

If a low-battery indication occurs, replace the battery.

Your system administrator may have programmed your radio to indicate a low-battery status in one of the following ways:

- When the PTT button is pressed, the bi-color LED blinks red to indicate a low-battery condition.
- When the PTT button is released following a transmission, you hear a short, high-pitched tone (chirp) to indicate a low-battery condition.
- When the radio is in the standby mode and a low-battery condition occurs, you hear an alert tone for 30 to 930 seconds at 30-second increments. This duration is programmed by your system administrator or radio technician.

General Radio Operation

Notes

Common Radio Features

Conventional Squelch Options

Tone Private Line (PL), Digital Private-Line (DPL), network ID, and carrier squelch operations are all available in the same radio on a per channel basis.

Note: Network ID is only available on ASTRO digital channels consult your service technician for details.

In carrier squelch operation, all traffic on the channel is heard. However, in PL, DPL, or network ID operation, your radio responds only to those messages intended for you. PL, DPL, network ID, and carrier squelch can be programmed for each channel.

Project 25 Digital Squelch Options

Each conventional personality may be programmed by your system administrator or radio technician for one of the following squelch options in digital mode:

Digital Carrier-Operated Squelch (COS)	This option allows the radio to respond to any received digital Project 25 signal.
Normal Squelch	This option allows the radio to respond to any digital Project 25 signal that has the correct Network access code.
Selective Squelch	This option allows the radio to respond to any digital Project 25 signal that has the correct Network access code and the correct talkgroup.
Data and Squelch	This option allows the radio to respond to any digital Project 25 signal that has the correct Network access code and is addressed to a specific radio. The radio responds to selective calls only.

Common Radio Features

Non-Project 25 Digital Squelch Options

Each conventional personality may be programmed for one of the following squelch options in digital mode (consult your service technician).

<i>No Squelch</i>	This option allows the radio to respond to any ASTRO digital signal that has the correct Network access code.
<i>Data or Squelch</i>	This option allows the radio to respond to any ASTRO digital signal that has the correct Network access code and the correct talkgroup.
<i>Data and Squelch</i>	This option allows the radio to respond to any ASTRO digital signal that has the correct Network access code and is addressed to a specific radio (the radio responds to selective calls only).

Emergency State

Your radio may have been programmed by your system administrator or radio technician with the Emergency State feature.

Press the preprogrammed Emergency button (see page 4) to send out an emergency signal that takes precedence over any other signalling activity in progress on the selected channel. There are two types of emergency signals:

- Emergency Alarm sends a data transmission to alert the dispatcher to an emergency condition and identifies the radio sending the emergency signal.
- Emergency Call is a type of dispatch operation that gives your radio priority access to channels. This feature is not available on conventional radios.

Note: Entering Emergency State signals a critical situation. It should never be used for any other reason.

If you change channels during emergency operation, the emergency alarm or call is moved to, and continue on, the new channel if the new channel is also programmed for emergency operation. If the new channel is not programmed

for emergency operation, you hear a continuous, low-pitched invalid mode tone until the radio exits emergency state or you change to a channel programmed for emergency operation.

For emergency-alarm with emergency-call signals, once an acknowledgment is received from the dispatcher, your radio enters emergency call state.

While your radio is in emergency-call state, it operates in the usual dispatch manner or returns to one of the following operations if programmed to do so:

- Tactical/Non-Revert Operation — you talk on the channel selected before entering the emergency state.
- Non-Tactical/Revert Operation — you talk on a preprogrammed emergency channel, and the emergency alarm is sent to this preprogrammed emergency channel.

Entering the Emergency State

- 1 Press and hold the preprogrammed Emergency button (see page 4). The length of the press-and-hold time required is programmed by your system administrator or radio technician.

During emergency alarm state:

- The LED lights red, and
- You hear a group of short, medium-pitched tone.
- When the emergency alarm is acknowledged by the dispatcher, the radio sounds four beeps and the alarm ends.

During a silent-emergency call:

- The LED will not light,
- You do not hear tones.
- The audio is muted (turned off) and remains so until you exit the emergency alarm state, and the silent-emergency state continues until you press the PTT button.

During an emergency call, press the PTT button to cancel the alert.

Common Radio Features

Exiting the Emergency State

It is important that you exit emergency state when it is no longer necessary.

To exit Emergency State, press the preprogrammed **Emergency button** for approximately one second. This duration is programmed by your system administrator or radio technician.

The way you exit Emergency State may vary based on how your radio was programmed by your system administrator or radio technician.

If your radio is programmed for emergency alarm,

Press the PTT button. The alarm is cancelled (without an emergency-exit tone), and you may begin transmitting your voice call.

OR

If your radio is programmed for emergency alarm with call,

Press the PTT button while the radio is in emergency-alarm operation to place the radio in emergency-call operation.

If your radio is programmed with emergency alarm only, the radio automatically exits emergency state after receiving an acknowledgment from the dispatcher or if the alarms are exhausted when no acknowledgment is received. This method applies to non-silent emergency alarm radios.

Note: If your radio is programmed for silent-emergency, your radio does not automatically exit Emergency State. One of the above methods must be used.

Emergency Keep-Alive

When this feature is enabled, moving the On/Off Control knob to the off position does not turn your radio off if it is in an emergency state. Your radio continues normal emergency operation as if the power is on. The radio will not turn power off until it exits emergency state.

Talkgroup Calls (Project 25 Radios Only)

Project 25 replaces Motorola's group selective calls with talkgroup calls. This feature allows you to define talkgroups for your conventional system. Talkgroups, combined with selective squelch operation, allow groups of users to transparently share a conventional channel. Talkgroups may be slaved to a personality by your system administrator or you may select them.

Encryption keys are slaved to talkgroups. When talkgroups are enabled, encryption keys are changed by changing the active talkgroup.

Individual Calls - Receive Only

Individual calls are defined as follows:

Telephone Calls	Similar to standard telephone calls, except you use your radio. These can be landline-to-radio or radio-to- landline calls.
Private-Conversation™ II Calls (Private Calls) (Trunked Channels Only)	One-on-one calls involving two specific radios in which the conversation is not heard by others in the current radio talkgroup.
Enhanced Private-Conversation Calls (Enhanced Private Calls) (Trunked Channels Only)	Same as Private Conversation II calls except the radio automatically verifies that the target radio is active on the system.
Selective Calls (Conventional Channels Only)	Used to selectively call an individual radio on Project 25 systems, or an individual radio or group of radios on non-Project 25 systems. It is intended to provide privacy and to eliminate the annoyance of having to listen to conversations that are of no interest to you.

Common Radio Features

Call-Alert™ Pages	Your radio functions like a pager; Call Alert pages provide a means to signal other radio users that you wish to get in touch with them (even if they are away from their radio or in a noisy environment). Call Alert pages also allow you to verify that the radio they are calling is active on the system.
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Note: In the following procedures, any reference to Private-Conversation (Private Call) represents both Private-Conversation II calls and Enhanced Private-Conversation calls, unless otherwise specified.

Answering an Individual Call

- 1 When an individual call is being received, you hear and/or see:
 - a telephone-type ringing if it is a telephone call;
 - two alert tones if it is a Private-Conversation call or Selective call;
 - a continuous cycle of four tones if it is a Call-Alert page;
 - a blinking green signal on the LED;
- 2 Telephone Calls Only — Press the preprogrammed **Call Response** button (see page 4).
OR
Private-Conversation Calls and Call-Alert Pages with Private-Conversation — Within 20 seconds, press the preprogrammed **Call Response** button (see page 4).

Selective Call — After two seconds the speaker is no longer muted.
OR
Call-Alert Pages Only — To respond, press the **PTT** button and your conversation is heard by the entire talkgroup.
- 3 Press the **PTT** button to talk and release it to listen.

- 4 To disconnect after you have finished your conversation, press the preprogrammed **Call Response** button (see page 4).

PL Defeat

The PL defeat feature allows you to override any coded squelch (DPL, PL, or network ID) that may be programmed to a channel. To activate this feature, place the preprogrammed **PL Defeat** switch if applicable (see page 4) in the PL Defeat position. You are able to hear any activity on the channel; if no activity is present, the radio is muted.

Repeater Access

Repeater access allows you to selectively activate repeaters, which is especially useful in areas where repeaters are placed close together to ensure total coverage. Repeater access can operate automatically or manually and can be enabled or disabled by your system administrator or radio technician for specific channels as required. During automatic repeater access, you hear a sidetone to indicate that the repeater access code is being transmitted to discourage you from talking over the data transmission.

In radios programmed with manual repeater access, you can activate the repeater access code transmission by pressing the preprogrammed **Repeater Access** button if your radio has one (see page 4). You do not hear a sidetone. On radios with MDC-1200™ signalling, when the repeater access is acknowledged, the radio sounds an acknowledge alert tone. The acknowledge alert tone can be programmed by your system administrator or radio technician.

Repeater/Direct

The repeater/direct feature allows you to bypass the repeater and talk directly to another radio. This is known as **DIRECT** operation or talkaround operation. The transmit frequency is the same as the receive frequency.

Common Radio Features

In REPEATER operation, you talk through the repeater, which increases the radio's operating range. The transmit frequency is not the same as the receive frequency.

Selecting Repeater or Direct Operation

Place the preprogrammed Repeater/Direct switch (see page 4) in the repeater position or the direct position.

Scan

Scanning allows you to monitor different channels automatically through the use of scan lists. If there is activity on a channel, the Scan feature automatically takes you to that channel.

Each radio can have up to 20 unique scan lists. These scan lists are programmed by your system administrator or radio technician either manually or using radio service software.

Three types of scan lists are available (consult your service technician for additional information):

<i>Trunking Priority Monitor</i>	Comprises channels that are all from the same trunking system (10 different channels maximum). This feature only works on systems that support it.
<i>Conventional</i>	Comprises only conventional channels (15 different channels, maximum).
<i>Talkgroup Scan</i>	Comprises conventional and trunked channels from more than one trunking system (10 different channels maximum). Priority operation is not available in this type of list.

Common Radio Features

Note: Priority channels and the selected channel cannot be deleted using the nuisance-delete feature.

The radio continues scanning the remaining channels in the list. To resume scanning the deleted channel, you can change channels or exit and re-enter scan operation.

Dynamic Priority Change (Conventional Operation Only)

While the radio is scanning, the dynamic priority change feature lets you *temporarily* change any channel in a scan list (except the Priority 1 channel) to the Priority 2 channel. The present Priority 2 channel becomes a non-priority channel. This change remains in effect until scan is turned off. Scanning then reverts to the preprogrammed state.

To change a channel to a Priority 2 channel:

- 1 Press the preprogrammed Dynamic Priority button (see page 4) when the radio is locked onto the channel to be designated as a Priority 2 channel.

Note: The Priority 1 channel cannot be changed to Priority 2 channel.

- 2 The radio continues scanning the remaining channels in the list. To resume scanning the preprogrammed Priority 2 channel, you must exit and re-enter scan operation.

Smart PTT

Smart PTT is a feature used in conventional radio systems to keep radio users from talking over other radio conversations. Smart PTT is programmed by your system administrator or radio technician.

When Smart PTT is enabled in your radio, you are unable to transmit on an active channel. If you try to transmit (press the PTT button) on an active Smart PTT channel, you hear an alert tone, and the transmission is inhibited. The LED blinks red to indicate that the channel is busy.

Common Radio Features

Three radio-wide variations of Smart PTT are available:

Transmit Inhibit on Busy Channel with Carrier	With this feature enabled, you are prevented from transmitting if any activity is detected on the channel.
Transmit Inhibit on Busy Channel with Wrong Squelch Code	With this feature enabled, you are prevented from transmitting on an active channel with a squelch code or (if secure-equipped) encryption key other than your own. If the PL code is the same as yours, the transmission is allowed.
Quick-Key Override	This feature can work in conjunction with either of the two above variations. With this feature enabled, you are able to override the transmit-inhibit state by quick-keying the radio; in other words, two PTT button presses within the time programmed through radio service software (RSS) for Smart PTT Quick-Key Timer (default value is 1/2 second).

Common Radio Features

Notes

Special Radio Features

Dynamic Regrouping

The dynamic regrouping feature allows the dispatcher to temporarily reassign selected radios to a single special channel so that they can communicate with each other. This feature, enabled in each radio by your system manager or service technician, is typically used during special operations. You will not notice whether your radio has this feature enabled until a dynamic regrouping command is sent by the dispatcher.

Note: If you select the dynamic-regrouping zone/channel using softkeys or other radio controls without being dynamically regrouped, you hear an short, low-pitched invalid tone.

When your radio has been dynamically regrouped, you hear a gurgie tone (unless you are already on the dynamic-regrouping zone/channel), and your radio automatically switches to the dynamic-regrouping channel.

Note: When you use a radio-control knob or switch to select the zone or channel, you are not be able to scan or initiate a private conversation call until you select the dynamic regrouping position. You also hear a gurgie tone each time you press the PTT button. This is a reminder to you that you are transmitting on the dynamic-regrouping channel, not the zone or channel indicated by the position of the radio control.

However, in some cases the radio is programmed as a select-enabled radio: see page 40 for details.

- 1 Press the PTT button to talk and release it to listen.
- 2 When the dynamic regrouping is cancelled by the dispatcher, your radio automatically returns to the present knob/switch zone and/or channel position.

Special Radio Features

Reprogram Request

This feature allows you to notify the dispatcher that you want a new dynamic-regrouping assignment.

- 1 Press the preprogrammed Reprogram Request button (see page 4).
- 2 If you hear one beep, press the PTT button to resend the reprogram request again.
If you hear five beeps, the reprogram request was acknowledged by the dispatcher.

Note: If the dispatcher fails to acknowledge the reprogram request within six seconds, you hear a low-pitched alert tone.

Select Enable/Disable

The dispatcher may classify regrouped radios into either of the following two categories:

- Select-enabled radios are free to make channel changes to any available channel, including the dynamic-regrouping channel.
- Select-disabled radios cannot change channels since the dispatcher has specifically chosen to force the radio to remain on the dynamic-regrouping channel.

Note: You cannot use the scan and private conversation call features when your radio is select disabled.

PTT-ID Transmit

The PTT-ID transmit feature is a per-channel feature in which your radio's ID number is automatically sent every time the PTT button is pressed. For analog voice transmissions, depending upon how your radio was programmed, your radio's ID can be transmitted at the beginning of a transmission, at the end of a transmission, or at the beginning and ending of a transmission. For digital voice transmissions, your radio's ID is sent continuously during the voice message.

Special Radio Features

KEY Loading

To load encryption keys into the radio:

- 1 Set up the radio and equipment as specified in the key-variable loader (KVL) manual.
- 2 When the KVL is attached to your radio, all other radio functions are locked out.
- 3 Press the KVL's PTT button to load the encryption keys into your radio. When the key has been loaded successfully, single-key radios sound a short tone and multi-key radios sound an alternate tone.

Key Erasure

With the radio on, press and hold the preprogrammed Top Side button (see page 4) while pressing the preprogrammed Emergency button (see page 4) at the same time.

Note: Pressing the Emergency button *before* pressing the Top Side button sends an emergency alarm.

MultiKEY

The multikey feature must be configured based on whether or not your radio is used for conventional applications or both conventional and trunked applications as described below:

<i>Multikey</i>	The encryption keys can be tied (strapped), on a one-per-channel basis by your system administrator or radio technician. In addition, you can have operator-selectable keys, operator-selectable indices, and operator-selectable key erasure. If talkgroups are enabled in conventional, then the encryption keys are strapped to the talkgroups.
<i>Trunked Multikey</i>	If you use your radio for both conventional and trunked applications, you have to strap your encryption keys for trunking on a per talkgroup or announcement-group basis. In addition, you may strap a different key to other features for example, dynamic regrouping, failsoft, emergency talkgroup, or emergency-announcement group.

Selectable Power Level

This feature allows you to select the power level at which your radio transmits messages.

Note: When the radio is powered on, it defaults to the programmed setting.

Place the preprogrammed **TX Power-Level Switch** (see page 4) in the either the high-power or low-power position.

The low-power provides shorter transmitting distance and conserves battery life.

High power transmission mode provides longer transmitting distance and utilizes more battery power.

The new transmit power level is saved.

Trunking System Controls

Busy Override

When a talkgroup call is placed in a SmartZone™ system and the system is not able to obtain voice channels at all necessary sites, you hear a group of low-pitched busy tones. If preprogrammed, you may override the busy status by performing the following steps:

- 1 Press the **PTT** button; you hear a busy tone.
- 2 Release the **PTT** button.
- 3 Press and hold the **PTT** button a second time. The busy tone is heard again. After a few seconds, you hear a preprogrammed busy-override chirp and the radio sends in a busy-override request.

The talkgroup call is placed at all sites that have voice channel resources available. Other sites are added to the call as channels become available.

Note: Not all members of the talkgroup are able to hear a call when a busy override is requested.

Special Radio Features

Dispatcher Interrupt

The dispatcher-interrupt feature allows the dispatcher to interrupt your radio and places you in a Private Conversation call with the dispatcher.

- 1 When your radio receives a dispatcher-interrupt call, you hear a repeating sequence of four, short, medium-pitched tones until you answer the call. The green LED flashes indicating that a call is being received.
- 2 Press the **PTT button** to talk and release it to listen.
- 3 To hang up when you are finished with your conversation, press the **Call Response button**.

Failsoft

If a trunking system experiences a complete failure, the radio reverts to Failsoft operation and automatically switches to its Failsoft channel. During Failsoft, the trunking repeaters transmit a medium-pitched tone every 10 seconds. When the trunking system returns to normal operation, your radio automatically exits the Failsoft operation and returns to trunked operation.

Out-of-Range

If you go out of range of the system and can no longer lock onto a control channel, you hear a low-pitched tone. Your radio remains in this out-of-range condition until it (1) locks onto a control channel, (2) locks onto a failsoft channel, or (3) the radio is turned off.

Site Lock

This feature allows your radio to lock onto a specific site and not roam among wide-area talkgroup sites. This is particularly useful when operating at the fringe of a system's coverage.

Press the preprogrammed **Site Lock/Unlock button** (see page 4).

Special Radio Features

Site Change

- 1 Press and hold down the preprogrammed **Site Search** button (see page 4) to manually force the change to a new site.

You hear a tone while the radio scans for a new site. When a new site is found, the tone stops.

Special Radio Features

Notes

Additional Information

Troubleshooting

If you suspect a radio problem, check the following items before requesting service:

1 Radio Checks

- Be sure the radio is turned on and the 16-Position Select knob is in the proper position.
- Replace or recharge the battery. The first time a new battery is used, it should charge a minimum of 16 hours.
- The antenna must be attached properly with its base flush against the top of the radio.
- Check that any accessories in use are properly connected.
- Test the radio from several different locations (especially if the problem occurs when the radio is used inside a building).
- Check the transmitter by transmitting to an alternate portable radio.

2 Operating Instructions

Review your operating instructions and ensure that you are using the radio properly.

- #### 3
- If, after following steps 1 and 2, your radio still has a problem, contact your system manager or review your service agreement and call your Motorola service representative as applicable.

If you ~~do not have a service agreement on your radio~~, contact your nearest authorized Motorola service shop for guidance toward a prompt and expedient evaluation and/or repair.

Additional Information

Radio Care

Handling

- Do not pound, drop, or throw the radio unnecessarily. Never carry the radio by the antenna.
- Avoid subjecting the radio to an excess of liquids. Do not submerge the radio unless it is a ruggedized, XTS 3000 R model.
- Avoid subjecting the radio to corrosives, solvents or spirits.
- Do not disassemble the radio.
- Keep the accessory-connector cover in place until you are ready to use the connector. Replace the cover immediately once the accessory has been disconnected.

Cleaning

To clean the external surfaces of your radio:

- 1 Combine one teaspoon of mild dishwashing detergent to one gallon of water (0.5% solution).
- 2 Apply the solution sparingly with a stiff, non-metallic, short-bristled brush, making sure excess detergent does not get entrapped near the connectors, controls or crevices. Dry the radio thoroughly with a soft, lint-free cloth.
- 3 Clean battery contacts with a lint-free cloth to remove dirt or grease.



Caution

Do not use solvents to clean your radio. Spirits may permanently damage the radio housing.

Do not submerge the radio in the detergent solution.

Service

Proper repair and maintenance procedures assures efficient operation and long life for this product. A Motorola maintenance agreement provides expert service to keep this and all other communication equipment in perfect operating condition. A nationwide service organization is provided by Motorola to support maintenance services. Through its maintenance and installation program, Motorola makes available the finest service to those desiring reliable, continuous communications on a contract basis. For a contract service agreement, please contact your nearest Motorola service or sales representative, or an authorized Motorola dealer.

Express Service Plus (ESP) is an optional extended service coverage plan, which provides for the repair of this product for an additional period of either one or two years beyond the normal expiration date of the standard warranty. For more information about ESP, contact the Motorola Radio Support Center at 8000 West Sunrise Boulevard, Ft. Lauderdale, FL 33322.

Battery

Battery Charge Status

Your radio can indicate your battery's charge status through an LED and/or alert tones.

See "Low-Battery Indication" on page 25.

Battery Recycling and Disposal

Rechargeable batteries may be recycled. However, recycling facilities may not be available in all areas. Under various U.S. state laws and the laws of several other countries, batteries must be recycled and cannot be disposed of in landfills or incinerators. Contact your local waste management agency for specific requirements and information in your area.

Additional Information

Motorola fully endorses and encourages the recycling of batteries. In the U.S. and Canada, Motorola participates in the nationwide Rechargeable Battery Recycling Corporation (RBRC) program for battery collection and recycling. Many retailers and dealers participate in this program.

For the location of the drop-off facility closest to you, access RBRC's Internet web site at www.rbrc.com or call 1-800-8-BATTERY. This Internet site and telephone number also provide other useful information concerning recycling options for consumers, businesses, and governmental agencies.

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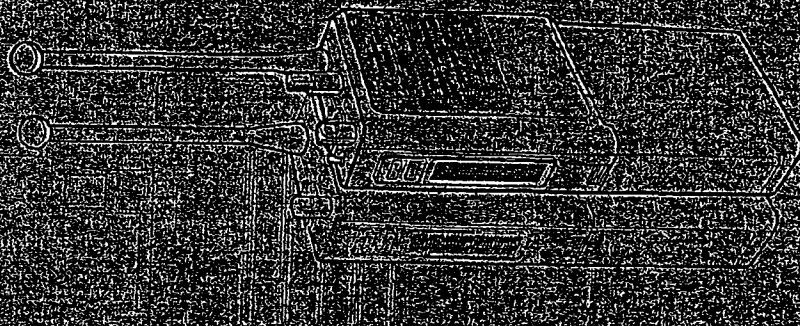
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MTX-800™ Privacy Plus®
Portable Radios

Operating Instructions

Motrolle Inc.
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Fort Lauderdale, Florida 33322-9934

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MTX-800™ Privacy Plus® Portable Radios

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Features

Description

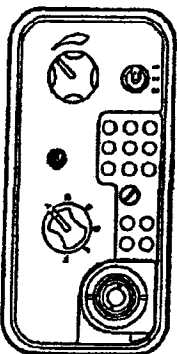
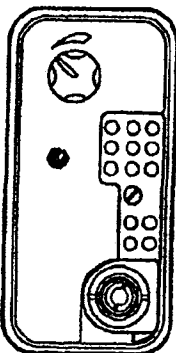
The Motorola MTX-800 Handie-Talkie® portable radio is available in two versions: The MTX-800 basic model (H25JGS170 N) and the MTX-800 "3 + 6" model (H25JMS170 N).

Basic Model Features

- Call Alert Decode
- Volume Set

"3 + 6" Model Features

- Six System Select
- Three System Select
- Volume Set



General Information

Unpacking

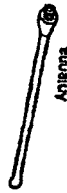
Remove and check the contents of the packing case to be certain that all ordered items have been shipped. Inspect all items thoroughly. If any items have been damaged during transit, report the damage to the shipping company immediately.



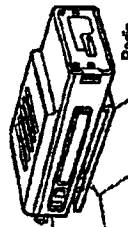
Operating Instructions



Radio Information Instruction Sheet



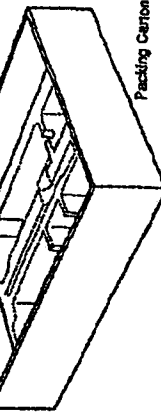
Antenna



Radio



Battery



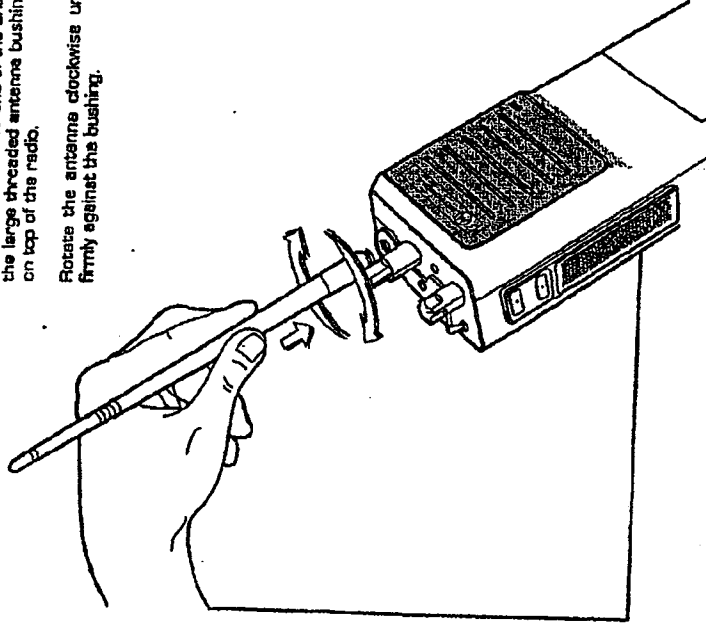
Packing Carton

4 General Information
Unpacking

Antenna Installation

Screw the threaded end of the antenna into the large threaded antenna bushing located on top of the radio.

Rotate the antenna clockwise until it fits firmly against the bushing.



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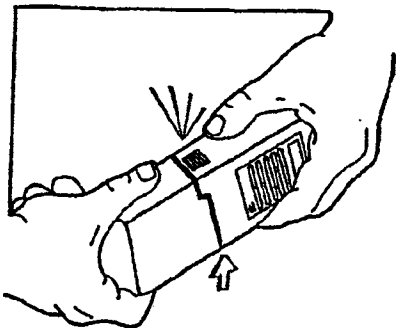
General Information
Antenna Installation 5

MAEP-30561-0

MAEP-30562-0

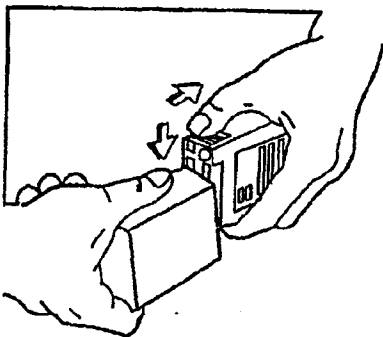
Battery Installation

Align the notched end of the battery with the grooves in the radio baseplate. Mate the notches and the grooves and slide the battery toward the battery latch until the battery "clicks" into place.



Battery Removal

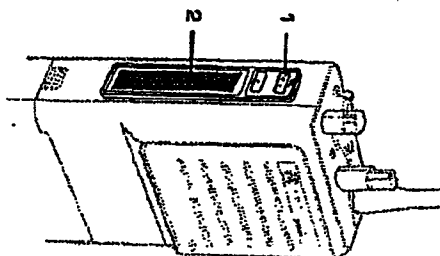
Remove the battery by holding the battery latch up toward the top of the radio. With the battery latch held up, slide the battery away from the latch until it is clear of the radio baseplate.



Note: The battery is shipped uncharged. Batteries must be charged before use. (See "Battery Information," page 18.)

Controls, Indicators, and Connectors

- 1 **Volume Set Button**
Press to generate the volume set tone. This tone can be used together with the volume control to adjust the radio receiver volume to a desired listening level.
- 2 **Push-to-Talk Switch (PTT)**
Press to transmit on the currently selected channel.
- 3 **Three Position Toggle Switch**
Programmable three-position switch used to access systems. ("3 + 5" model only)

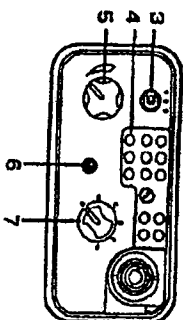


- 4 **External/Accessory Connector**
Allows operation with accessories.

- 5 **On/Off Switch - Volume Control**
Turns the radio on and off and adjusts the radio volume level.

- 6 **LED Transmit Indicator**
Lights up when the radio is transmitting.

- 7 **Rotary Select Switch**
Programmable switch used to access subfrequencies. ("3 + 5" model only)



Alert Tones

The MTX-800 radio generates the following audible tones to indicate radio operating conditions:

Illegal Mode

A low-pitched "beeeeh" tone is heard when an invalid or unprogrammed operation is attempted. (For example, the rotary and toggle switches are set to an unprogrammed position. A cricket-like "chirp-chirp" heard when the PTT is released indicates that the battery charge is getting low. The tone will also sound every two minutes when the radio is idle.

A low-pitched "beeeeh" tone heard while transmitting indicates that the present transmission will be cut off in four seconds. Quickly release the PTT and press it again to cancel the tone and finish transmitting your message.

A tone is heard when the volume set button is pressed. This tone can be used together with the volume control to adjust the radio receiver volume level. The tone continues for one second after the button is released.

A high-pitched "off-off-off" tone heard when the PTT is pressed indicates that a channel grant has been received from the trunking controller and the radio can transmit.

A continuous "beeh-beeh-beeh" tone heard when the PTT is pressed indicates that the system is busy (no voice channels are available). Release the PTT and wait for a Call Back tone.

This is the same as the Talk Permit tone. It is heard following a Dispatch Busy when a voice channel becomes available. When the Call Back tone is heard, press the PTT to transmit.

A continuous "beeeeh" tone heard when the PTT is pressed indicates that there is no response from the trunking controller; transmission is not possible. The radio may be out-of-range or not authorized to access the trunked system.

Four "beep" tones indicate that a Call Alert (page) is being received. These tones will repeat every six seconds until the page is acknowledged.

A faint "beep" tone heard every ten seconds when the radio is idle indicates that the trunking controller has failed. Transmission is still possible, but will be as in conventional operation.

Talk Permit/ Out-of-Range

Call Back

Dispatch Busy

Talk Permit

Volume Set

Time-Out/Timer

Low Battery

Call Alert (Page) Decode

Fallsch.

Operating Procedures

After a fully charged battery and an antenna have been connected to the radio, you may begin operating your radio. If necessary, review the preliminary information to be sure you understand the radio's features, controls, and indicators.

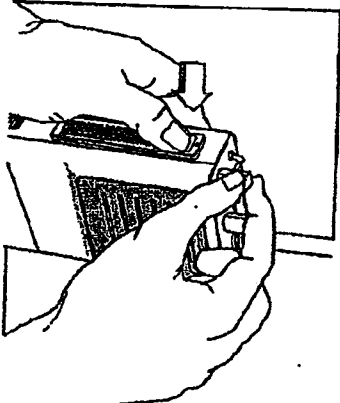
To Turn the Radio On and Off

Turn the on/off switch in a clockwise direction. If the radio is not already turned on, the knob will click as it is turned.

To turn the radio off, turn the switch counterclockwise until it clicks.

To Set the Volume Level

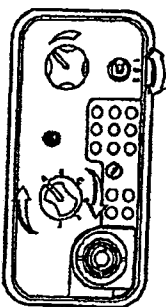
The Volume set button allows you to adjust the radio receiver volume before a transmission is received. Press the volume set button on the side of the radio. You will hear the volume set tone.



To increase the volume level, turn the volume control knob clockwise. To decrease the volume level, turn the knob counterclockwise.

Selecting Channels ("3 + 6" model only)

To select a desired channel, adjust the rotary and the toggle switches to the marked channel position. The indicator mark on the rotary switch designates the currently selected position.



MOT 000269
ATTORNEYS EYES ONLY

MTX-800-0
MTX-800-0

General Information
To Turn the Radio On and Off /
To Set the Volume Level / Selecting Channels



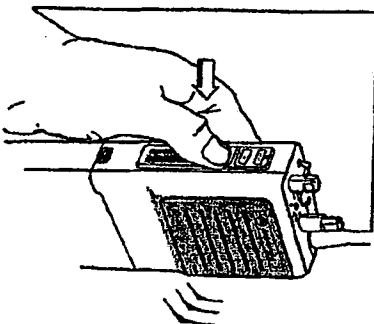
Receiving Dispatch Calls

Voice traffic is heard through the radio's speaker when a dispatch call is received. Press the PTT to transmit a response and release it to listen for replies.

Proper Transmit Techniques

When transmitting, speak carefully and clearly in a normal voice. Shouting will not make a message easier to understand. Make each transmission as brief as possible.

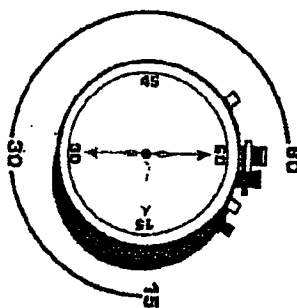
- Hold the radio upright with the antenna in a vertical position.
- Keep the antenna away from the face while transmitting.
- With the radio two to three inches from the lips, press the PTT and speak into the radio grille area.
- Release the PTT to receive any replies.



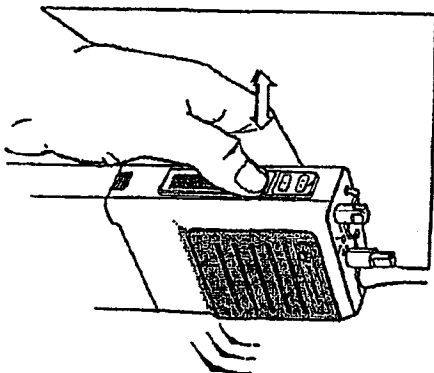
Time-Out Timer

Time-out timers are preset for 15, 30, or 80 seconds. If the PTT is pressed and held for more than the preset time, radio transmission will be cut off. This is to prevent a unit from tying up a channel.

With four seconds remaining in the preset time, the time-out timer tone will be heard (beep-beep). If the PTT is released and pressed quickly (quick-keyed), you can continue your conversation uninterrupted and reset the timer.

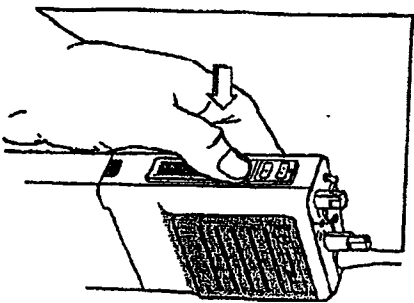


At the time-out point, the transmission is cut off (the LED will turn off) and the time-out timer tone will be heard continuously until the PTT is released.



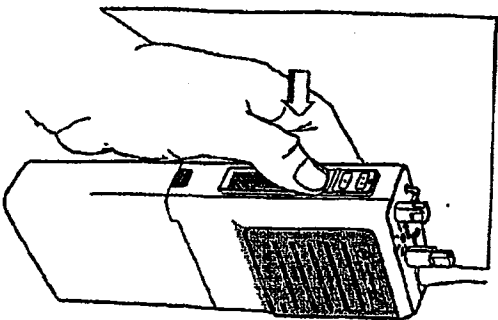
Making Dispatch Calls

Press the PTT. If a talk permit tone is heard, transmit normally. For "3 + 5" models, be sure to select the desired subchannel with the rotary and toggle switches.

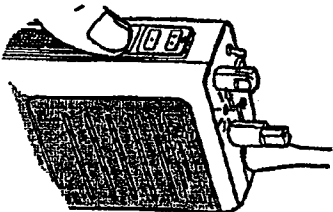


"Oh-Oh-Oh"

If a dispatch busy tone is heard, release the PTT and wait for a call back tone. When the call back tone is heard, press the PTT and transmit normally.



"Beep"



"Beep-Beep"

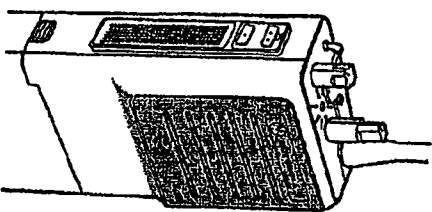
If a continuous talk prohibit tone is heard while the PTT is pressed, transmission is not possible. The radio may be out-of-range or not authorized to access the trunked system.

12 | Operating Procedures
Making Dispatch Calls

MA8R-20233D
MA8R-20231C
MA8R-20232D

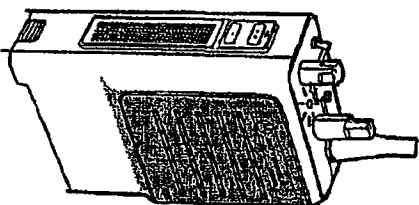
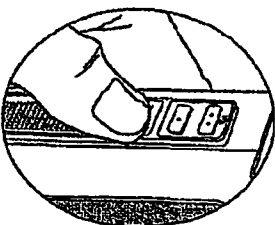
Receiving a Call Alert (Page)

When a Call Alert (page) is received, four "beep" tones will be heard. These tones will continue every six seconds until the page is acknowledged.



"Beep
Beep
Beep
Beep"

To answer the page, press the PTT and speak normally. Release the PTT to receive replies.



"Beep"

Fallsort Operation

In the event of trunked system failure, radio communication is still possible in the fallsort mode. When the trunking controller fails and the system is within range, the radio will automatically enter fallsort.

A faint beep is heard every ten seconds to indicate that the radio is in fallsort. The radio operates on a pre-determined frequency in a non-trunked (conventional) manner. Therefore, channels must be monitored before use to make sure they are not busy.

When the trunked system returns to normal operation, the radio will automatically leave fallsort and the fallsort tone will stop. Resume normal trunked operation.

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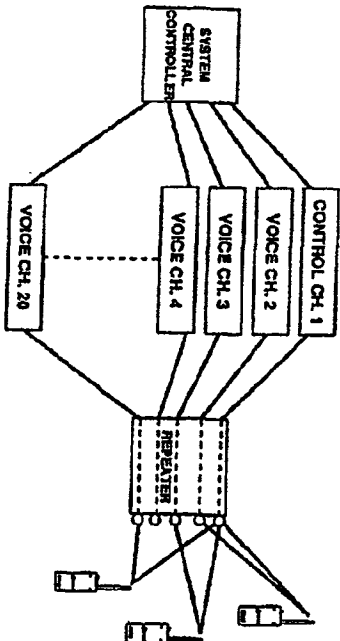
Operating Procedures
Receiving a Call Alert (Page) /
Fallsort Operation

13

How a Trunked System Operates

A trunked system uses repeater channels to create a communications path. Each system contains up to 20 repeater channels, depending on system requirements. The trunking controller, the main control unit of the system, uses one of the channels as a dedicated control channel. This channel is the link between the trunking controller and radios in the system. The trunking controller continuously transmits information to all radios. This information consists of timing signals to keep radios synchronized to the trunking controller and identification signals to identify the control channel. All radios automatically monitor the control channel when there is no voice traffic and are silent until summoned by the trunking controller.

A typical system might consist of a certain number of radio units operating within an organized group, known as a fleet. Each fleet can be segmented into independent subfleets. Subfleet assignment allows the fleet to be organized into predetermined groups according to function. Members of a subfleet hear only those messages intended for the talk group.



When a user presses the PTT to begin communication, the following events occur, all in less than one second:

- A voice channel request is automatically sent to the trunking controller via the control channel.
- The trunking controller decodes this request, identifies the user, and determines which subfleet is being called.
- The trunking controller acknowledges the request via the control channel and begins searching for a clear voice channel.
- The requesting radio alerts the user to go ahead if a voice channel has been assigned, or to stand by for a talk permit if all voice channels are busy.

Once a voice channel has been assigned, the trunking controller assigns the same voice channel to all subfleet members. This allows other members of the subfleet to join communication already in progress.

If the trunking controller receives a voice channel request from a radio in another subfleet, it assigns that radio and its subfleet to an unoccupied voice channel. This action will not affect or disrupt communication already in progress on other occupied voice channels.

Advantages of a Trunked System

Trunked operation has one main goal: to improve a system's efficiency by sharing its resources among many users. Although trunking has been used for many years by telephone companies, Motorola has pioneered its use in the two-way radio industry. Trunked operation offers the user many advantages over conventional, non-trunked radio operation:

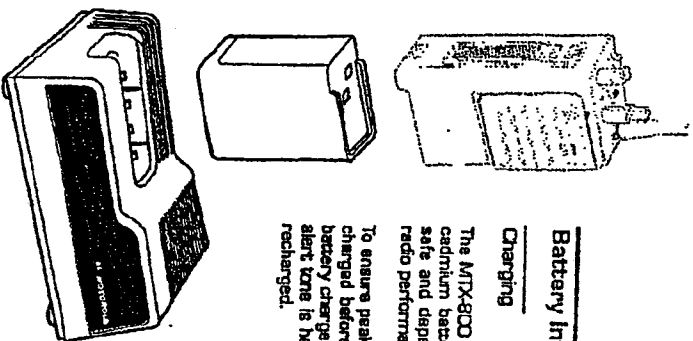
- The trunking controller automatically selects and assigns communication channels, making operators simpler, reliable, and efficient.
- Channel assignment is restricted to one group at a time, eliminating interference and ensuring privacy.
- One attempt is required to access the communication system. If all channels are busy, the trunking controller will automatically assign the next available channel to the user.

Battery Information

Charging

The MTX-800 Handie-Talkie radio uses rechargeable nickel-cadmium batteries. When properly used, they provide a safe and dependable power source necessary for peak radio performance.

To ensure peak radio performance, batteries should be fully charged before use and periodically thereafter. When the battery charge falls to an unacceptable level, a low battery alert tone is heard, indicating that the battery needs to be recharged.



Warning: Improper use of batteries may create fire and/or explosion hazards.

Batteries should be charged at about 77°F. Charging in cold temperatures (below 45°F) may result in electrolyte leakage and destroy the battery. Charging in hot temperatures (above 85°F) will not damage the battery, but reduced charge capacity will result.



Charging Times

Approximate Charging Time for Typical Charger/Battery Combinations

BATTERY MODEL	CHARGERS	
	STANDARD NTN4835 NTN4836 NTN4866 NTN4867	RAPID NTN4833 NTN4834 NTN4868 NTN4922
NTN4822, NTN4823 NTN5447, NTN4825	18 Hours	1 Hour

Contact a Motorola sales representative for the proper charger model to be used when operating from 115 or 230 Vac line voltages.

Note: When charging a battery that is attached to a radio, always turn the radio off to insure a full battery charge.

Memory Effect

A nickel-cadmium battery may exhibit reduced charge capacity called the "memory effect." Memory effect is caused by one or both of the following conditions:

- Continuous battery overcharge for extended periods of time. If a battery is lightly or infrequently used and is allowed to charge for extended periods of time (30 to 60 days), it may develop the memory effect.
- Repeated battery charging for short periods of time. This is the most common cause of memory effect. If a battery is operated so that it repeatedly delivers part of its full capacity, the unused half can become temporarily inactive. When battery current demand is increased, it may display a sharp decrease in ability to deliver proper voltage.

Memory effect can be eliminated by completely discharging the battery and recharging again. Two discharge/charge cycles are usually sufficient to restore the battery to full capacity.

Any nickel-cadmium battery exhibiting reduced charge capacity should be checked for memory effect before it is returned for warranty or discarded.

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Battery Warnings

The following precautions should be observed while charging and handling batteries:



Batteries should not be replaced or charged in a hazardous atmosphere. Contact sparking while installing or removing batteries from radios and chargers may trigger an explosion.



Do not dispose of batteries in fire; disposing of batteries in fire will create an explosion hazard.



Avoid short-circuiting the battery. A short circuit, such as a paper clip dropped accidentally across the battery terminal, will permanently damage the battery, void the warranty, and create a fire hazard.



Charge batteries with the appropriate Motorola chargers only. (Refer to the Accessories section of the manual.) Charging batteries in any other equipment may lead to battery damage and will void the battery warranty.

General Radio Care

Cleaning

Clean external surfaces of the radio with a mild detergent and a stiff, non-metallic, short-bristled brush. A suitable detergent solution may be mixed by adding one teaspoon of mild dishwashing detergent to one gallon of water (0.5% solution). Apply the detergent solution sparingly with the brush, being careful not to allow excess detergent to remain trapped near connectors and controls or in cracks and crevices. Do not submerge the radio in the detergent solution. Dry the radio thoroughly with a soft, lint-free cloth.

Clean all battery contacts with a lint-free cloth to remove dirt, grease, or other foreign material that may prevent good electrical connections.

Handling

Avoid physical abuse: do not pound, drop, or throw the radio unnecessarily. Do not carry the radio by the antenna.



Avoid subjecting the radio to an excess of liquids. Never allow the radio to become submerged.

Avoid subjecting the radio to corrosives, solvents, or sprays.

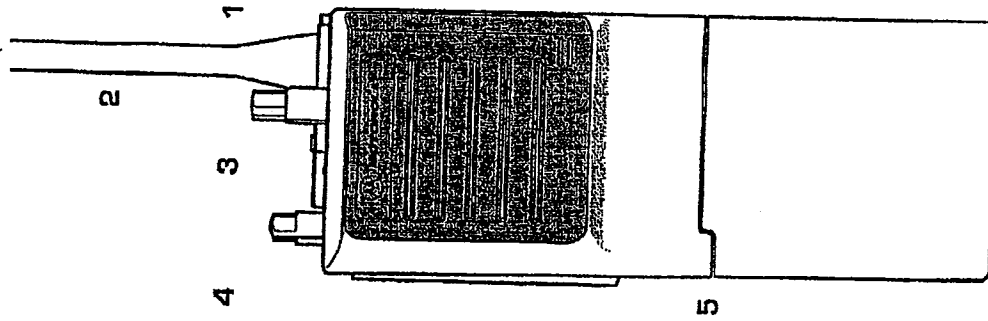
Caution: Clean the radio with the recommended solution only. Cleaning the radio with solvents or sprays may be harmful and permanently damage the radio housing.

Do not disassemble the radio in any way. Keep the connector cover in place until ready to use the accessory connector. Replace the cover immediately after the accessory has been disconnected.

Operating Hints

In case of difficulty, review the operating instructions to ensure that all directions are clearly understood and closely followed. If difficulties persist, please check the following items before requesting service.

1. Check the antenna; it must be undamaged and seated firmly against the antenna bushing.
2. Make sure the antenna is held in a vertical position while operating. Performance may be improved by trying different operating positions and locations, especially if you are inside a building.
3. Check the transmit LED. Transmitter performance may be measured by the LED; it should glow brightly while transmitting. A dim or blank LED may indicate a discharged battery or transmitter fault condition.
4. Check the rotary and toggle switch settings. Programmed systems/subunits are specified on the Radio Information Instruction Sheet.
5. Check the battery and replace it if weak or damaged. Charge the battery if necessary.



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Accessories

Motorola offers a wide variety of accessories to increase communications efficiency and effectiveness. Contact a Motorola sales representative for complete information on the entire line of available accessories.

Accessories designed for use with the MTX-900 radio include:

Batteries

NTN4822A Medium-capacity rapid rate nickel-cadmium
NTN4823A Medium-capacity FMV-approved nickel-cadmium
NTN5447B High-capacity rapid rate nickel-cadmium
NTN4823A High-capacity FMV-approved nickel-cadmium

Battery Chargers

NTN4835A Standard rate single-unit charger; 117 volt
NTN4636A Standard rate single-unit charger; 220 volt
NTN4633A Rapid rate single-unit charger; 117 volt
NTN4634A Rapid rate single-unit charger; 220 volt
NTN4696A Compact charger; 117 volt
NTN4667A Compact charger; 220 volt
NTN4668A Multi-unit charger; 117 volt
NTN4822A Multi-unit charger; 220 volt

Carry Accessories

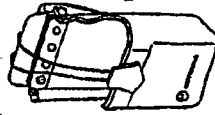
NTN4916B 2 1/2" belt clip
NTN4824A 3" belt clip
NTN4814A Belt clip carry holder
NTN4998A Urethane strap
NLN4529A 2 1/2" belt loop, swivel
NLN4365A 3" belt loop, swivel
NTN4878A Nylon T-strap
NTN4758B Leather case and T-strap
NTN4855B Swivel case and T-strap
NTN4899A Spacer for Carry Case
NTN5449 Leather DTMF Swivel Case

Audio Accessories

NNN6145A Remote Speaker/Microphone with Earphone Jack
NNN6155A Remote Speaker/Microphone with Velcro
NNN6156A Remote Speaker/Microphone with Belt Clip
NTN5043A Earpiece and volume control



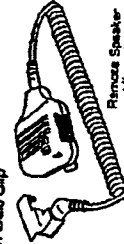
Earpieces and Volume Control



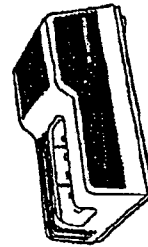
Leather Case and T-strap



Compact Charger



Remote Speaker/Microphone



Single-Unit Charger

MA8P-2017-14
MA8P-2017-15
MA8P-2018-20

Administration and Regulations

FCC Safety Standards

The Federal Communications Commission (FCC), with its action in General Docket 78-144, March 13, 1985, has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Motorola subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure substantially below FCC recommended limits.

- Do not hold the radio with the antenna very close to, or touching, exposed parts of the body, especially the face or eyes, while transmitting. Hold the radio in a vertical position with the microphone two to three inches away from the lips.
- Do not hold the transmit switch (PTT) on when not actually desiring to transmit.
- Do not allow children to play with any radio equipment containing a transmitter.

Safety Guidelines

- Do not operate radio transmitters near explosive blasting caps. The transmitted radio energy may trigger a blasting cap and cause an explosion.
- Do not operate radio transmitters in an explosive atmosphere unless it is a type especially qualified for such use. An explosion may result.
- Do not replace or charge batteries in a hazardous atmosphere. Contact sparking may occur while installing or removing batteries and cause an explosion.
- Do not dispose of batteries in fire. Batteries may explode when subjected to extremely high temperatures.
- Do not short circuit the radio. An accidental short circuit, such as a paper clip dropped across the battery terminals, may generate enough heat to spark a fire.

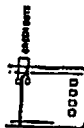
Hazardous Atmosphere Operation

Anyone intending to use a radio in a hazardous area is advised to become familiar with the subject of intrinsic safety and with Section 70 of the National Fire Code, which is commonly referred to as Article 500 of the National Electric Code. Use of anything but factory supplied components may affect the approval and safety of the radio. Likewise, it is advised that servicing should be performed only by qualified personnel who adhere to the following FM required warning:

Warning: Modification of FM approved intrinsically safe radios will negate FM approval.

Certain MTX-800 radios and batteries have been declared intrinsically safe by Factory Mutual Research Corp. (FMRC) of Norwood, Massachusetts, for use in hazardous atmospheres. FM approved radios are identified by attached certification labels and by matching green dots found on the backs of radios and batteries. The intrinsically safe rating by Factory Mutual states that electrical equipment is incapable of releasing sufficient electrical or thermal energy under normal or abnormal operating conditions, to cause ignition of a specific hazardous atmosphere. This means the MTX800 radio has been thoroughly tested by Factory Mutual and carries its certification for operation in the hazardous atmospheres designated on the radio label. Radios must ship from the Motorola factory with the hazardous atmosphere options and cannot be modified in the field. Failure to use the radio with the approved battery will negate this approval. MTX-800 radios that are approved by Factory Mutual can be used in those applications requiring reliable two-way hand-held radios in the listed specific hazardous atmospheres. Motorola approved equipment and accessories, along with competitive equipment approvals, are listed in the yearly approval guide published by Factory Mutual Research Corporation. This guide can be ordered from the following address:

Resource Center for Loss Control Management
Factory Mutual Research Corp.
1131 Boston-Providence Turnpike
P.O. Box 688, Norwood, MA 02062



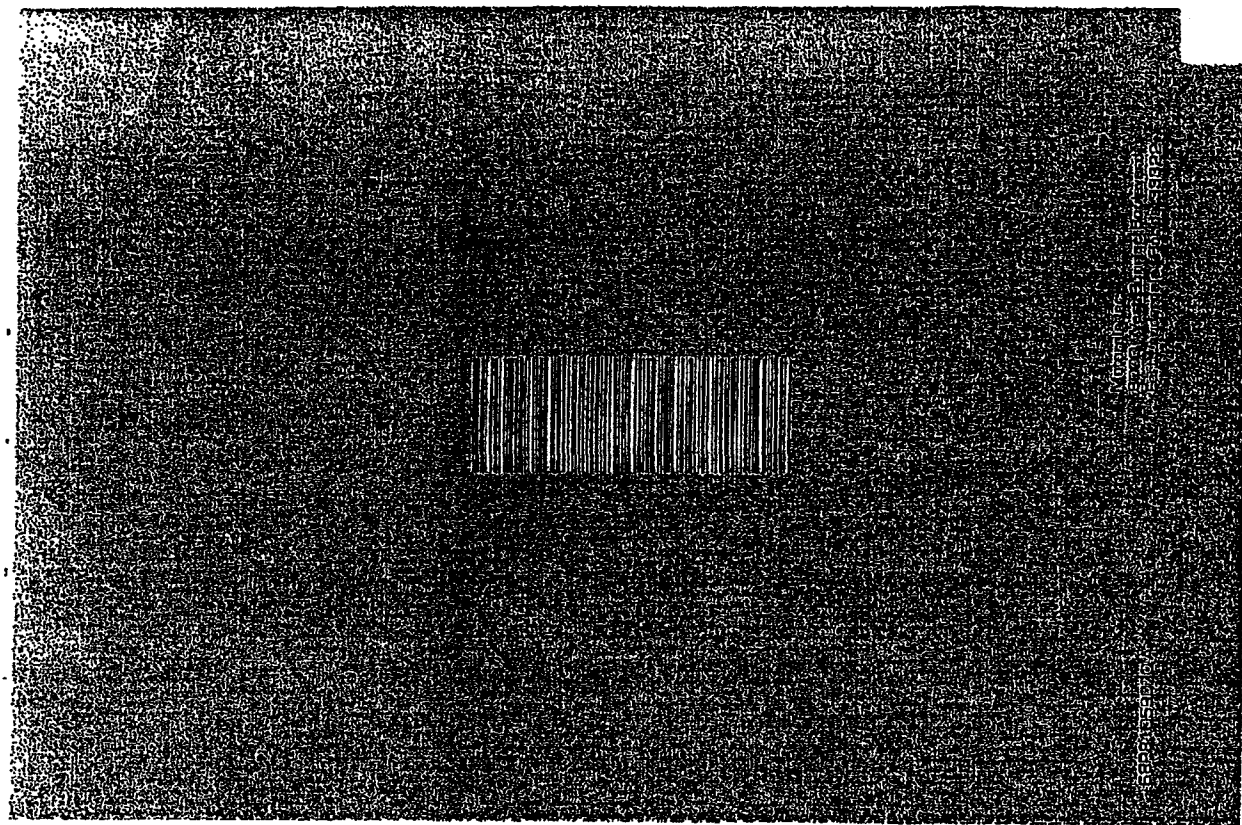
The following radios and accessories are approved as intrinsically safe by Factory Mutual. Refer to the radio label for intrinsic safety ratings and required batteries. Only the accessories and antennas listed below may be used on approved radios.

Intrinsically Safe Models and Accessories

H25JG851700N	H25JWF51700N
Kg Number NIMN8145A	Description Remote Speaker/Microphone with Earphone Jack
NIMN6155A	Remote Speaker/Microphone with Velcro
NIMN6156A	Remote Speaker/Microphone with Belt Clip
NTN5043A	Earpiece and volume control Adapter
NTN4812A	Audio Accessory Jack
NTN5075A, B	Dipole Antenna
NAP4000B	Whip Antenna
NAP4050A	

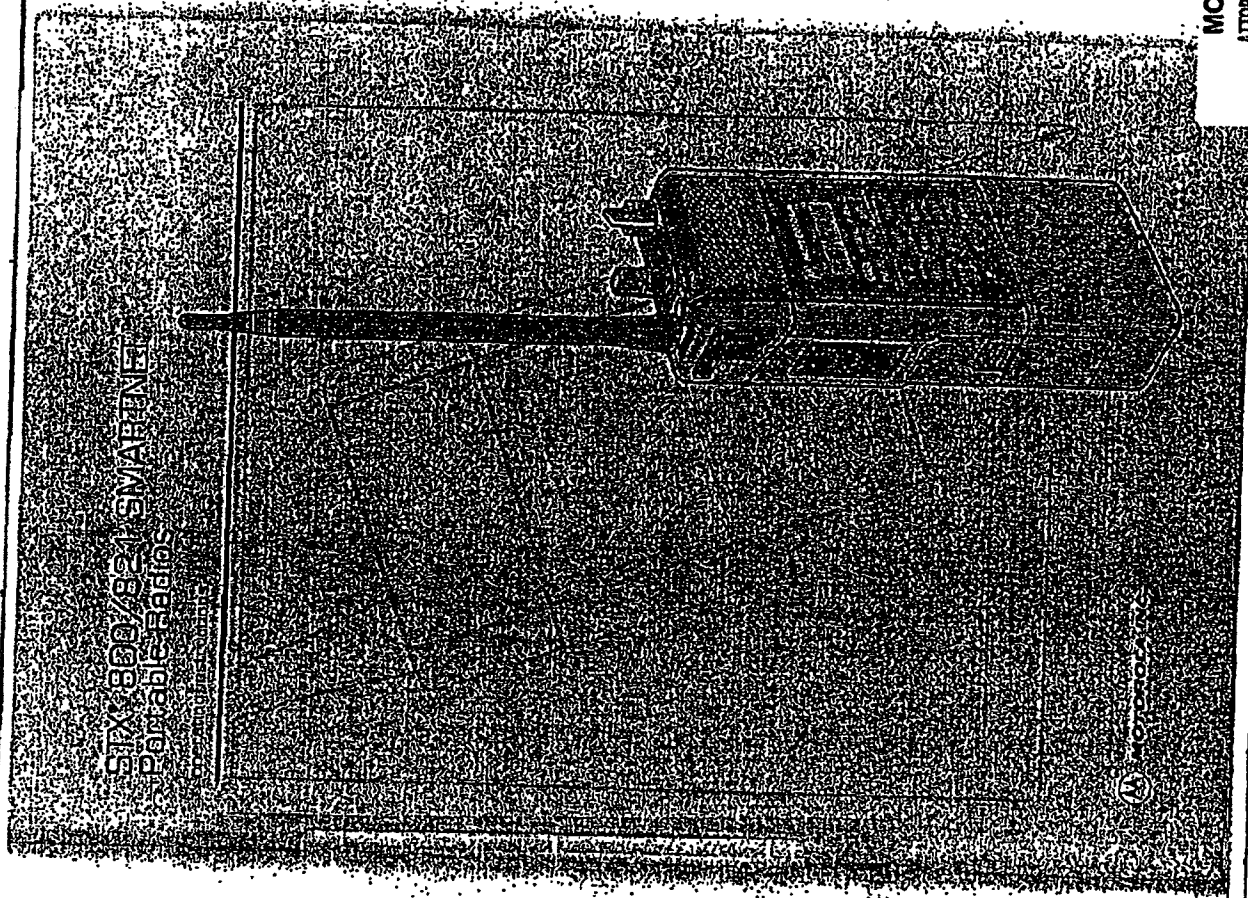
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Opposer's Exhibit 9



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STX® 800/821 SMARTNET™ Portable Radios

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Introduction

Identifying Your STX 800 and 821 Radios

The STX 800 and 821 radios are available in several models. In appearance, these models differ primarily in their use of a rotary knob and a display and keypad. The following tables provide a brief visual summary of the radio models and their configuration.

STX 800 Models

Radio Model Number	Rotary Control	Display/Keypad
H85WKA5175 N	18 positions subselect/talk group select	15-key keypad
H85WPA5175 N	18 positions subselect/talk group select	3-key keypad
H85WKA5175 N	2 positions no rotary	15-key keypad
H85WPA5175 N	2 positions no rotary	15-key keypad
H85WKA5175 N	18 positions no rotary	15-key keypad
H85WPA5175 N	18 positions no rotary	15-key keypad
H85WKA5175 N	18 positions no rotary	15-key keypad
H85WPA5175 N	18 positions no rotary	15-key keypad

STX 821 Models

Radio Model Number	Rotary Control	Display/Keypad
H85WKA5170 N	18 positions subselect/talk group select	15-key keypad
H85WPA5170 N	18 positions subselect/talk group select	3-key keypad
H85WKA5170 N	2 positions no rotary	15-key keypad
H85WPA5170 N	2 positions no rotary	15-key keypad
H85WKA5170 N	18 positions no rotary	15-key keypad
H85WPA5170 N	18 positions no rotary	15-key keypad
H85WKA5170 N	18 positions no rotary	15-key keypad
H85WPA5170 N	18 positions no rotary	15-key keypad

N/A = not available

Description

The SMARTNET STX 800/821 radio is among the most sophisticated two-way radios on the market today. It can operate on both trunked systems and conventional channels, providing you with maximum communications capability under varying operational circumstances.

Among its many features, the SMARTNET STX radio provides you with Digital Voice Protection (DVP). This allows you to operate in a standard (clear voice transmission) or secure (encrypted voice transmission) mode. The standard mode is completely compatible with existing two-way systems. Secure transmissions use a highly sophisticated non-linear digital voice scrambling technique which assures secure communications. Only other secure SMARTNET-equipped radios (portables, mobiles, or base stations) that are programmed with an identical key (user-selectable digital word) can decode the secure transmission.

Note: To be consistent with the published literature and operational guidelines, the terms "key" and "key variable" are used to describe the user-selectable digital word that controls the secure operation.

STX 800 Features

- Direct Alphanumeric Mode Names
- Sublist/Talk Group Scan
- Priority Monitor Scan
- System Search and Lock
- Compatible with Type I, Type II and Hybrid Systems.
- Multiple Trunked Systems and/or Conventional Channels or Multiple Sublists/Talk Groups
- Emergency Alarm or Call
- Dynamic Regrouping
- Selectable Private-Line/Digital Private-Line
- Call Alert Decode
- Falscalt by Talk Group/Sublist (strapped only)
- Secure/Clear Operation (strapped only)
- Slaved Secure/Clear Operation
- Manual Key Descript
- Time-Out Timer
- Automatic Multiple Site Select (AMSS)
- Status/Message
- Call Alert Encode
- Private Conversation
- Telephone Interconnect (15-Key models only)
- Conventional DTMF Phone Patch (15-Key models only)
- Keypad Lock

STX 821 Features

Non Keypad Models

- Mutual Aid Frequencies (821 - 825 MHz)
- Compatible with Type I, Type II and Hybrid Systems
- Multiple Trunked Systems and/or Conventional Channels or Multiple Sublists/Talk Groups
- Emergency Alarm or Call
- Dynamic Regrouping
- Selectable Private-Line/Digital Private-Line™
- Call Alert™ Decode
- Falscalt by Talk Group/Sublist
- Secure/Clear Operation (strapped only)
- Slaved Secure/Clear Operation
- Manual Key Descript
- Time-Out Timer

Keypad Models - All of the above features plus the following:

- System and Talk Group Alphanumeric names
- Private Conversation and Call Alert Display (Type II or Hybrid system only)
- Sublist/Talk Group Scan
- Priority Monitor Scan
- System Search and Lock
- Automatic Multiple Site Select (AMSS)
- Status/Message
- Call Alert Encode
- Private Conversation™
- Telephone Interconnect (15-Key models only)
- Conventional DTMF Phone Patch (15-Key models only)
- Keypad Lock

Trunked Versus Conventional Radio Operation

Trunked

The STX trunked portable radio offers you many advantages including fast system access, enhanced privacy, and ease of operation. In a trunked system there is no need for you to monitor a channel before transmitting.

Conventional

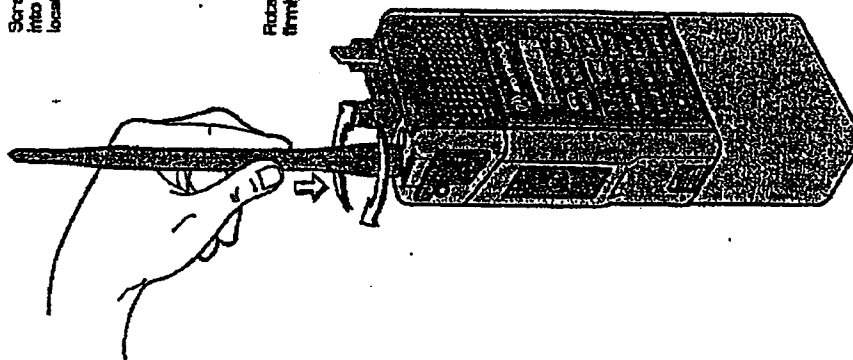
In conventional mode, the STX radio performs like a conventional two-way radio. Conventional channels can include repeater and talk-around (unit-to-unit) operation, and mixed Private-Line (PL), Digital Private-Line (DPL), and carrier squelch transmit and receive. PL and DPL are forms of signaling which allow the radio to remain silent until the proper code is detected along with the carrier (voice transmission). When a carrier is detected with the proper code, the radio unmutes and the voice transmission is heard. This allows for a level of privacy not available in carrier squelch radio operation.

General Information

Antenna Installation

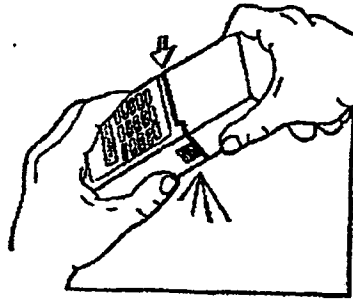
Screw the threaded end of the antenna into the large threaded antenna bushing located on top of the radio.

Rotate the antenna clockwise until it fits firmly against the bushing.



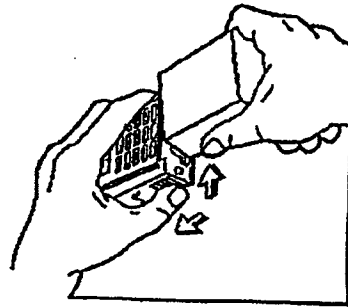
Battery Installation and Removal

Align the notched end of the battery with the grooves in the radio baseplate. Mate the notches and the grooves and slide the battery toward the battery latch until the battery "clicks" into place.



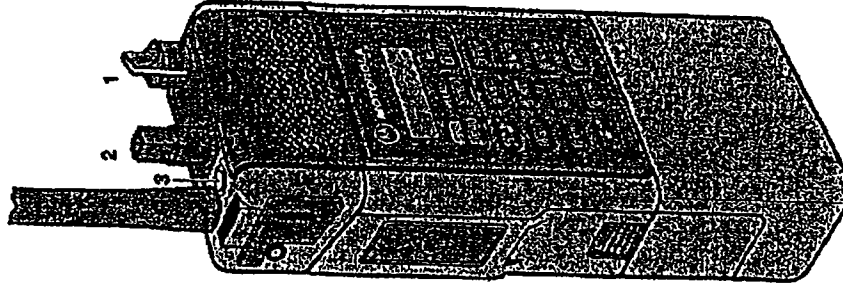
Remove the battery by holding the battery latch up toward the top of the radio. With the latch held up, slide the battery away from the latch until it is clear of the radio baseplate.

Note: The battery is shipped uncharged. Batteries must be charged before use. (See "Battery Information," page 60.)



Controls, Indicators, and Connectors

- 1 **On/Off - Volume Control**
Used to turn the radio on and off and adjust the receiver volume level.
- 2 **Rotary Control**
Switch which may be used to select system/mode, subflects/talk groups, switch between secure and clear transmissions, repeater and talk-around operation, or keypad lock, depending on programming. It can also select one of eight PL/DPL/CSS or arm key deactiv.
- 3 **Control Button**
Programmable orange button, located on top of the radio, which may be used for emergency alarm/call, volume set, key deactiv, or for telephone interconnect, or as function depending on programming.
- 4 **Universal Connector**
Used to connect the radio to external accessories or test equipment. The universal connector is fitted with a protective cover which should be left in place when the connector is not in use.
- 5 **Push-to-Talk (PTT) Switch**
Used to transmit when pressed; the radio reverts to receive (monitor) when the PTT is released.
- 6 **Battery Latch**
Used to secure the battery to the radio.

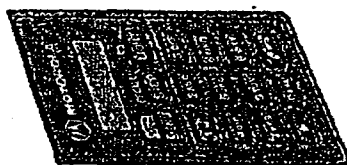


Keypad

The keypad is used to access the various features available within your radio. The keypad consists of three control keys, MENU, STEP, and LIGHT. In addition, some models have a 3 x 4 numeric keypad below the control keys which is arranged like a standard telephone keypad.

Control Keys

- **MENU key** - Used to access the functions programmed in the radio. Press MENU until the desired function is displayed. This key is also used to hang up after a telephone call, if programmed for telephone interconnect.
- **STEP key** - Used to select the value of the displayed function. If the radio is programmed with telephone interconnect, Call Alert, or Private Conversation encode, the RECALL function is used to access stored numbers.
- **LIGHT key** - Used to light up the display if radio is programmed for light enable. If the radio is programmed for secure operation, this key can also be used to select secure and clear voice communication.



Display



The STX radio has an eight-character alphanumeric display plus two rows of annunciators for displaying the status of various radio functions. The illustration shows all the possible annunciators and their meanings.

Note: The illustrations in this manual showing LCD displays are examples. Your display may at times appear slightly different than the example.

List of Audible Tones

The radio can generate a number of alert tones. Each tone indicates a particular radio status. The following list provides a brief description of each tone.

Call Alert Encoder:

(a) 1 high-pitched "beep" tone indicates that your Call Alert was sent but not received. (b) 5 "beeps" indicate your Call Alert (Page) has been received.

Call Alert Decoder:

4 High-pitched "beep" tones when a Call Alert (Page) is received. The tones repeat every 8 seconds until answered.

Call Back:

3 short, high-pitched tones ("di-di-di") indicate channel availability.

Clear Mode Transmit:

High-pitched "beep" heard when PTT is pressed and the radio is in clear transmit mode. This is to alert the user that the call is not encrypted.

Continuous Key Fail Tone:

Repetitive high-pitched "beeps" heard when the PTT is pressed while the radio is in secure mode. Indicates key has been damaged or destroyed. (Secure equipped radios only)

Dispatch Busy:

"Bee-bee-bee-bee" tones as long as PTT is pressed. This tone indicates that all available channels are busy. Release the PTT and wait for a Call Back tone.

Dynamic Regrouping:

A distinct "gurgles" tone indicates that your radio has been regrouped to talk with users on a different talk group and announcement group. (It may require action on the part of the user if select is disabled with talk group rotary.)

Emergency Alarm:

(a) 1 high-pitched "beep" tone indicates that your Emergency Alarm has been sent.

(b) 5 "beeps" indicate that your Emergency Alarm has been acknowledged by the central trunking controller (non-console ACK required radios) or by the dispatcher (console ACK required radios).

Failure:

Continuous low volume beeping tone, generated by repeater, every 10 seconds indicating failure of operating conditions.

Illegal Mode:

Continuous low-pitched "beep" as long as the radio remains in the illegal mode.

List of Audible Tones (cont.)

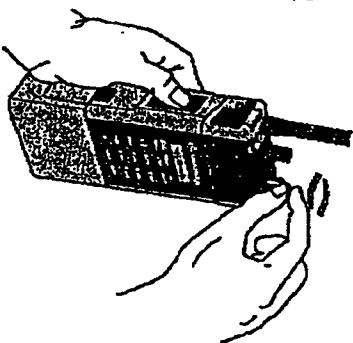
Invalid Key Press:	"Bank" sound indicating the key press or PTT has been rejected.
Low Battery:	Chicken-like "chirp-chirp" after the PTT is released indicates that the battery needs to be charged or replaced.
Message (in MSS mode):	(a) 1 high-pitched "beep" tone indicates that the message was sent to the dispatcher, but not received. (b) 5 "beeps" indicate that the message was received. Same as Call Alert tones.
Out-of-Range:	Continuous low-pitched tone heard while PTT is pressed. Same as Talk Prohibit.
Periodic Key Fall Tones:	6 high-pitched "beeps" heard every five seconds to warn the user that the radio is in secure standby mode without a key loaded to the encryption board. (Secure equipped radios only)
Phone Busy:	"Bef-buf-bef-buf" tones much like a telephone busy signal.
Priority Monitor:	1 high-pitched "beep" heard during priority scanning when voice traffic is detected on the priority channel.
Private Conversation Call:	2 high-pitched "beeps" when a private call is received.
Status (in STS mode):	(a) 1 high-pitched "beep" tone indicates that your status was sent to the dispatcher but not received. (b) 5 "beeps" indicate that your status was received. Same as Call Alert tones.
Talk Permit:	Same as Call Back.
Talk Prohibit:	Continuous low-pitched tone heard while PTT is pressed. Same as Out-of-Range.
Time-Out/Timer:	Continuous low-pitched "beeper" tone heard while transmitting. Indicates the present transmission will end in 4 seconds from the beginning of the tone.
Valid key press:	Chicken-like "chirp" heard each time a key is pressed if key tones are enabled.

How To Operate The STX Radio

How to Turn the Radio On and Off

Turn the on/off switch in a clockwise direction. If the radio is not already turned on, the knob will click as it is turned.

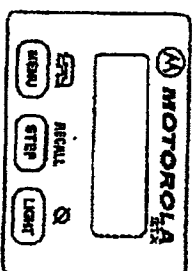
To turn the radio off, turn the switch counterclockwise until it clicks.



Basic Display Operation for Radios with LCD Display

Pressing MENU allows you to move in sequence through the functions available on your STX radio. To select a function for use:

1. Press MENU until the desired function is displayed.
2. Press STEP to select the value of the displayed function.
3. Follow the operating procedures for the selected function.
Keep in mind that:
 - a. When you're asked to press a specific button, press it only as indicated. Don't hold it down unless told to do so; otherwise you may go past the function you want.
 - b. Not all of the STX radio's functions will be available to you on each system. Also, it is possible that you won't have a given function on your radio at all.
 - c. Normal use of the radio and display buttons will not harm the radio.
 - d. If you hear your piece, press MENU until you get back to what you wanted to do.



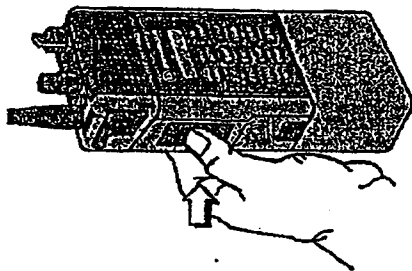
How to Make a Trunked Group Call

trunked systems

To transmit, simply press the PTT switch. If you hear a "busy signal" (a low frequency "beep-beep-beep"), release the PTT switch and wait for a call back tone ("beep"). When you hear the call back tone, press the PTT to make your call. The radio will "hold" the system for 3 seconds to allow you to place your call without getting another busy signal.

A talk prohibit tone (continuous tone heard while the PTT is pressed) might mean that you're out of range of the trunked system.

On display radios, a lightning bolt appears at the top left of the display to indicate that you're transmitting.

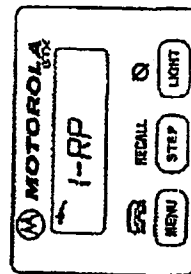


conventional channels

Press the PTT switch to initiate a transmission. If a channel is not busy, no monitoring is necessary. On display radios, the lightning bolt will appear at the top left of the display to indicate that you're transmitting.

If a channel is busy, the radio will not transmit when you press the PTT. Instead, your radio will unquench and monitor for as long as the PTT is pressed. If you keep the PTT pressed, the STX radio will transmit as soon as the channel is clear.

If you release and press the PTT you will Talk-Over the other transmission.



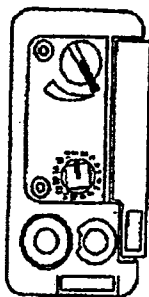
What to Do When You Receive a Talk Group Call

trunked systems or conventional channels

When you receive a call, you will hear it through the radio speaker. To respond, simply press the PTT to talk; release it to listen.

How to Select Systems or Talk Groups Using the Rotary Knob

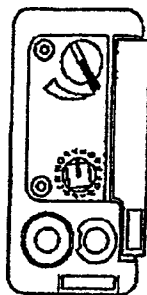
The basic STX radio (non-display) has a 18-position sub-fleet/talk group select rotary knob. An option on this model can change the talk group rotary to a system select rotary. The systems can be all trunked systems or a combination of trunked systems and conventional channels.



Notes: (STX 800 models only) If your radio is programmed with direct alphanumeric mode names, you cannot use the rotary knob to select systems or talk groups.

Display model radios can be programmed with 18-position sub-fleet/talk group select rotary knob.

Turn the rotary knob to the desired position to transmit and receive.



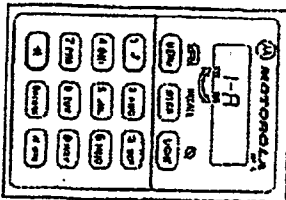
How to Select Systems/Sub-fleets/Talk Groups When System and Talk Group Alphanumeric Names are Programmed

Through field programming only, you can have your STX 821 radio programmed with alpha mode names for systems and sub-fleet/talk groups. This allows you to give your systems and sub-fleets/talk groups descriptive names in combinations of up to eight characters in length. Follow the steps for keypad selection of systems and sub-fleets/talk groups for operation.

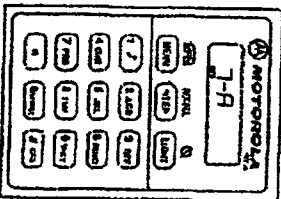
How to Change Systems/Subsystems/Talk Groups Using the 15-Button Keypad

display radios only

Press *. What happens? If your radio is in SLB, it moves directly to SYS. If it is in SYS it moves directly to SLB. If any other annunciators are displayed, pressing * will move you to SLB.

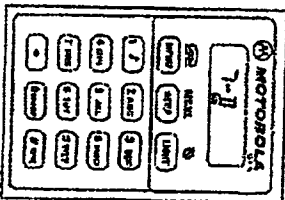


In addition to using the STEP method described in the previous section, you can change your system and subsystem/talk group position by using the numbered keys on the keypad. For example, if you're in SYS you can press the digit(s) of the system number you want; your radio will move directly into that system.



In SLB, if you are in subsystem/talk group A and want to move into subsystem/talk group D, press the 3 (DEF) key. To go to subsystem/talk group E, press the 5 (EFT) key again. Press it once again to go to subsystem/talk group F. If your radio doesn't have any of these subsystem/talk groups programmed for the current system, you'll hear an invalid key tone (sounds like "bong").

Note: If your radio is programmed with system and talk group alphanumeric names, the above steps still apply. Simply use the system number and subsystem/talk group letter that have been assigned to the alphanumeric system and subsystem/talk group names.



For STX 800 Direct Alphanumeric Mode Names radio only

(available through field programming only)

1. To directly select a system and subsystem/talk group using the keypad, Press MENU until the SLB indicator is displayed then press STEP; when "MODE ---" is displayed, Press the digit(s) for the number(s) equivalent of the mode name you want to select.

Example: "WFR" is the mode name for the system and subsystem/talk group in the western region. Its mode numeric equivalent is 18. Press STEP "MODE ---" is displayed, then enter 018. The digit, as they are entered, will appear on the screen in the right most position. When the third digit is entered, the radio will switch to the new operating mode.

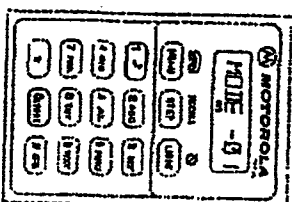
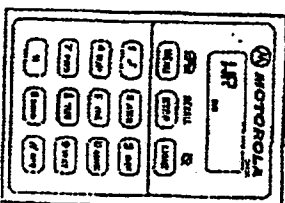
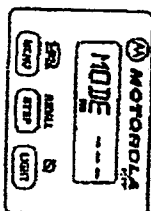
Note: Three digits can be entered to directly select the mode. Leading zeros can be entered for one and two digit mode numbers. One or two digit numbers may also be entered followed by a press of the STEP key.

2. If an invalid mode number is entered, an invalid key tone will be heard and the entered digits will flash for 4 seconds before "MODE ---" appears on the display again. If no keypad entries are made for 6 additional seconds, the radio will return to the mode it was in before.

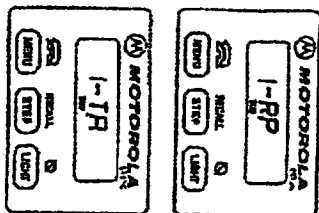
3. To exit the mode number entry process without changing modes, press STEP while "MODE ---" is displayed. You will hear a valid key chirp and the radio will return to the mode it was in before.

Note: Pressing MENU or * while in mode select will cause you to exit mode select and return to the last valid mode entered.

If the PTT is pressed while in mode select, the radio will transmit on the last valid mode entered. When the PTT is released, the radio will return to mode select.



How to Use Selectable Repeater/Talk-Around



display radios only

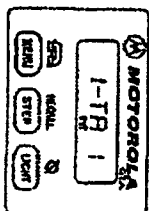
If your radio has selectable Repeater/Talk-around, you can change from repeater operation (RP) to talk-around (TA, unidirectional) operation through the keypad. This is helpful in remote areas where a repeater is inaccessible.

1. When you are in a conventional system, press MENU until SUB is displayed.
 2. Press STEP to alternate between RP and TA.
- Note: If your radio is programmed with system/talk group alphanumeric names or direct alphanumeric mode names, you cannot select repeater/talk-around through the keypad, but only through the rotary knob.

How to Use Selectable Private-Line/Digital Private-Line

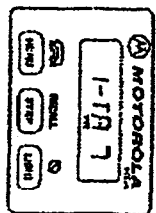
display radios only

If your radio has selectable PL/DPL, you can operate on up to eight different PL/DPLs while on a conventional channel. PL/DPL allows you to talk privately only with other radios that have the same PL/DPL code.



1. Press MENU until PVT appears on the display. The number on the right is the PL/DPL currently in use.

2. To change your PL/DPL, press STEP to scroll through the available PL/DPLs on the channel. You can also enter the number (1-9) of the PL/DPL you want to select by pressing the appropriate numeric key.



How to Operate The STX Radio

How to Change System/Broadcast/Talk Groups Using the 15-Button Keypad /
How to Use Selectable Private-Line/Digital Private-Line

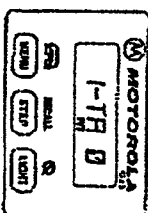
How to Use Selectable Private-Line/Digital Private-Line (cont.)

3. A special feature of some selectable PL radios is PL number ID. This entry turns off the PL and allows you to monitor all activity on the channel.

- a. When your STX 800 radio is programmed with direct alphanumeric mode names, only the number for PL/DPL selected will be displayed.

- b. When your STX 821 radio is programmed with system and talk group alphanumeric names, the number of the PL/DPL selected will be displayed, with either RP or TA.

Note: If your radio is programmed with alpha mode names, the number for the PL/DPL selected will be displayed, and either RP or TA.

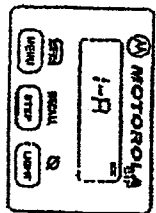
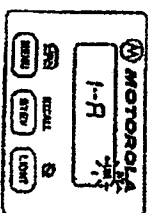


How to Lock/Unlock the Keypad

You can lock the keypad to prevent accidental mode changes. Press MENU until LCK appears on the display. If it is flashing, the keypad is not locked. Press STEP to lock the keypad. LCK will be on solid. Press STEP again to unlock. LCK will be flashing again.

Through field programming only, the rotary switch can be programmed for keypad lock. In this case, turning the rotary switch to the first position will unlock the keypad, trying it to any other position will lock the keypad.

Note: If the rotary switch is programmed for keypad lock, it cannot be used for any other function.



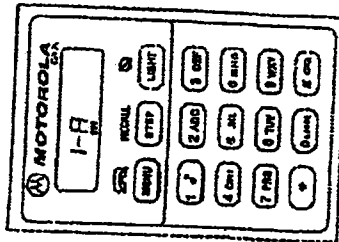
How to Operate The STX Radio

How to Use Selectable Private-Line/Digital Private-Line /
How to Lock/Unlock the Keypad

MOT 000325

ATTORNEYS EYES ONLY

How to Mute/Unmute the Keypad Tones

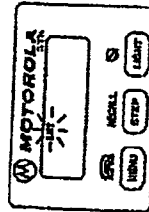


display radios only

You can turn the keypad tones ("chirp") of your STX radio off and on. Press MENU and SUB is displayed. Press 1 (1) on the keypad. If the tones are "on," pressing 1 (1) will turn the tones off. If you press any other key, you will notice that there is no "chirp." Press 1 (1) again to turn the keypad tones back on.

Notes: Your radio will always remember if the keypad tones are "on" or "off," even when you turn the radio off.

How to Recognize a Low Battery Condition



A brief low battery tone ("chirp-chirp") warns you when your radio's battery is getting low. You will hear the alert tone each time you release the PTT switch until you either change the battery or replace it with a freshly charged one.

display radios only

In addition to the alert tone, the STX display radio has a low-battery alert indicator. When your radio's battery needs changing the BATT indicator on the display will begin flashing.

What Failsafe is and How it Works

During trunked operation, if the central trunking controller fails for any reason the STX radio will go into "failsafe." In failsafe your radio transmits and receives on a pre-determined frequency in a conventional, as opposed to trunked, mode. Failsafe insures that you have communications capability at all times.

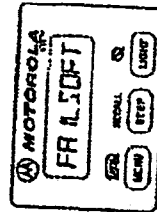
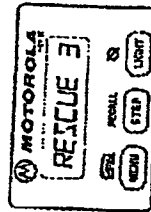
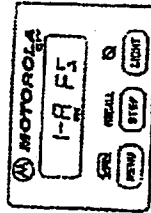
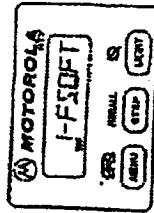
display radios

On STX display radios, FSOFT is shown on the display. You hear a low volume beeping tone every 10 seconds while the radio remains unacquainted.

When the trunking system returns to normal operation the beeping tone stops. FSOFT disappears from the display, and your last system and subfleet/talk group position is shown.

If FS is displayed, your failsafe channel is tied to your talk group, and another failsafe channel may be selected by selecting a different talk group position.

When your radio is programmed with system and talk group alphanumeric names or direct alphanumeric mode names, the alphanumeric names of your system and talk group will alternate with FAILSAFE on the display.



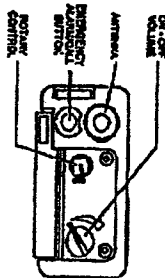
STX 821 non-display radios

On non-display STX radios failsafe is signaled by a faint beeping tone every 10 seconds while the radio remains unacquainted. You know the trunking system has returned to normal operation when the beeping tone stops.

How to Select Mode of Transmission (Clear/Secure)

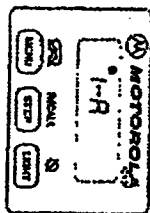
basic model

Clear and encrypted voice transmissions are pre-defined and assigned on a per talk group basis. In other words, each rotary position is programmed for a specific talk group as either clear or encrypted voice transmission.



8-position rotary model

The 8-position rotary model may be defined for rotary clear/secure mode select. In this case the rotary control is redefined as the transmit mode select switch (TMSS). This allows you to select between clear voice (position 1: 0) or secure voice (position 8: 7) transmission. Systems and subfrequencies/talk groups are programmed as "scrambled," providing the rotary (for example, while on a talk group that is scrambled secure, selecting clear voice with the TMSS will be overridden by the scrambling.)



subflex/talk group rotary or non-rotary display/modes

The light button can be defined for clear/secure mode select (keyed TMSS). To select encrypted voice transmission mode, press and hold the LIGHT button for 1.5 seconds until the secure mode symbol (S) appears on the display and you hear a "good key chirp." To return to clear voice transmission, press and hold the LIGHT button again for 1.5 seconds until the secure mode symbol disappears and a "good key chirp" is heard.

How to Select Mode of Transmission (Clear/Secure) (cont.)

Secure/Clear Mode Selection for the GTX Radio

Programmed Talk Group Encryption	TMSS Function	Secure Annunciator	Mismatch Display
1a) Selectable	Clear	Off	- none needed -
1b) Secure Only	Secure	On	- none needed -
2a) Clear Only	Clear	On	- "SEC Only" -
2b) Secure	Secure	On	- none needed -
3a) Clear Only	Clear	Off	- none needed -
3b) Secure	Secure	On	- "CLR Only" -

Notes: In cases 3a and 3b the secure annunciator will be off. A rotary TMSS will provide passive feedback of the switch position to the user based upon the visible physical position. No such feedback is possible with the keypad TMSS. A transmit mode mismatch will only be indicated when the PTT is pressed.

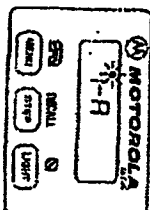
There are times where the user may be in the secure mode, yet the talk group calls only. If this is the case, the system will inform the user that the other users are capable of only clear conversations. In such a case, the display will show "CLR ONLY" and secure transmissions are prohibited.

How to Recognize Mode of Communication

If the clear mode transmit alert tone is enabled, a high-pitched tone is heard each time the PTT is pressed when transmitting in clear mode. (This is the only indication of transmit mode for the basic model.)

On display radios, the secure mode symbol (S) will appear on the display while the radio is in secure mode. If the secure mode symbol (S) is not displayed, the radio is in clear transmission mode.

If the radio is receiving a signal opposite to the mode selected, the secure mode symbol (S) will flash for as long as the signal is present and modes are interchanged. Selecting the correct (matching) mode will cause the symbol to stop flashing.



How to Keyload

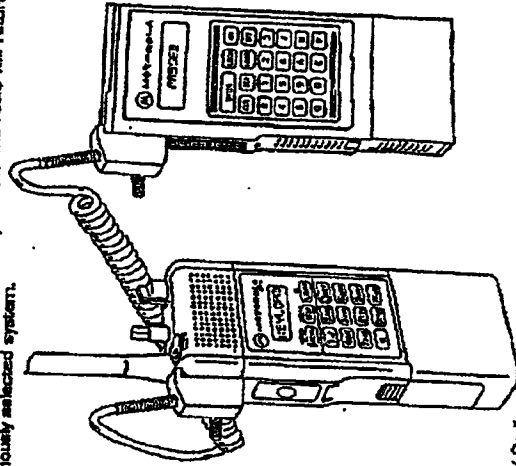
For secure-equipped STX radios, a key must be loaded into the encryption memory of the radio from a key variable loader before your radio can communicate in secure mode. The key variable loader mates to the radio universal slide connector through the TKN8208A portable radio cable, as illustrated.

Note: The key variable loader model to use for key loading is dependent on the encryption algorithm residents in the radio.
non-display radios

To load the key, press the PTT switch on the key variable loader with the radio turned ON. (The radio will not operate during key loading.) When key loading is complete, a one-second high-pitched tone will be heard, indicating that the key has been successfully loaded. The radio will return to operation on its previously selected system.

display radios

To load the key, press the PTT switch on the key variable loader with the radio turned ON. The display will show KEYLOAD. (The radio will not operate during key loading.) When key loading is complete, a one-second high-pitched tone will be heard, indicating that the key has been successfully loaded. The radio will return to operation on its previously selected system.



28 | How to Operate The STX Radio
How to Keyload

How to Destroy the Key

All secure-equipped radios are designed to quickly destroy key if the battery is removed while the radio is turned ON. If the radio is turned OFF when the battery is removed the key will be retained for at least 90 seconds, allowing you time to replace a low battery with a freshly charged one.

For radios programmed with key destruct the orange control button is redefined. To destroy the key, move the rotary control to any key destruct position (8-16), then press the orange control button. A high-pitched tone followed by one second of keytail tones lets you know that the key has been destroyed.

Note: Only positions 1, 2, and 8-16 are valid for radios with a 16-position TMSS/key destruct rotary. Only positions 1 and 8-16 are valid for radios with a key destruct-only rotary. However, if the rotary control is left in positions 3-16 (for TMSS/key destruct) or positions 2-16 (for key destruct only) for longer than 3 seconds, an illegal mode tone will be heard. After the key has been destroyed, move the switch back to position 1 to regain clear mode radio operation.

display radios only

When you turn to a key destruct position, the secure mode symbol (S) on the display will be on if key is present. When key is successfully destroyed the secure mode symbol turns off. On display radios with keypad TMSS, the secure mode symbol (S) will always be on.

How To Operate The STX Radio | 29
How to Destroy the Key

MOT 000328
ATTORNEYS EYES ONLY

How To Make a Trunked Phone Call

Important: Your STX display radio has the **STEP** button, **RECALL** above the **STEP** button, **0** on the **#** button, and **STORE** on the **O** button. The meaning of each of these symbols and terms are described in this section of the manual.

display radios only

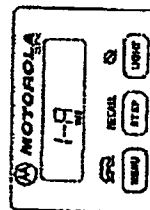
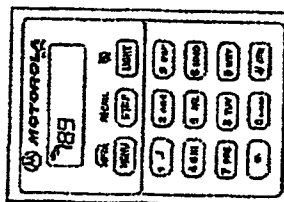
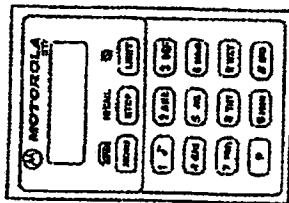
1. Press the **#** (**CALL**) key on the keypad to get a dial tone. (You can also press the orange control button if it is programmed for telephone interconnect.)

Notes: If you see **NO PHONE** or **WAIT** for several seconds, the STX radio is having trouble accessing the system. Hang up by pressing **MENU** . . . and try another operating location.

If you see **BUSY** and hear a busy tone (beep-beep), the system is busy and the radio will give you a dial tone when a phone line becomes available if you don't hang up.

2. To dial, press the correct buttons for the phone number. The lightning bolt and the digits are displayed as you dial. Wait while the phone rings and your call is answered.
3. Press the **PTT** switch to talk, release it to listen.
4. Press **MENU** (**CALL**) to hang up when your call is finished. (You can press the orange control button if it is programmed for telephone access.)

Notes: When you make a phone call, it's good practice to let the person you're talking to know that you're calling from a portable radio. The person you called will hear a "chirp" when you stop transmitting, telling them that you're now listening for their response.



How to Make a Conventional Phone Call

display radios only

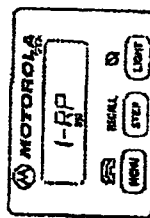
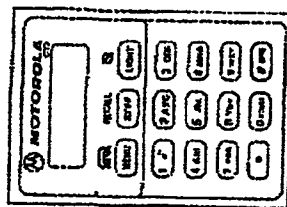
If your radio has conventional DTMF (phone) operation, you can access the telephone patch feature of a repeater. (This option is available through Radio Service Software or Field Code Management only.)

1. Press the **#** (**CALL**) key on the keypad (or the orange control button if it is programmed for phone). If your radio is programmed with automatic access codes, the correct access code will be sent to establish a phone patch.

If your radio is not programmed with automatic access codes, you must enter the code from the keypad to obtain a dial tone. (If the system is busy, you will hear busy tones, the radio automatically exits phone and returns to dispatch mode.)

2. Proceed with steps 2 and 3 from page 30.
3. To hang up, if your radio is programmed with automatic access codes, press the **MENU** (**CALL**) button (or the control button, if programmed); the correct access code will be sent.

If your radio is not programmed to send the access code, you must enter it from the keypad, then press the **MENU** (**CALL**) button to hang up.



How to Make a Secure Phone Call

When placing a secure phone call, perform steps 1 and 2 on page 30 while the radio is in clear mode. When your call is answered, select the secure (enc/ptt) mode. Do not attempt to change to secure mode while you are transmitting; changing modes during transmit is not allowed. You will hear a beep when you hear your transmission has been cut off.

Notes: To make a secure phone call, be sure that the system is equipped with secure operation and that the identical key is loaded in both the system and your radio.

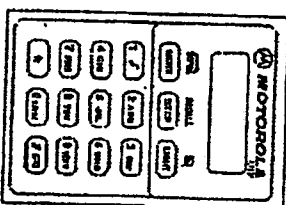
Only the entire portion of this call will be secure (not the portion transmitted over the phone lines).

You can also make conventional secure phone calls (if available on your system) by following the procedure under "How to Make a Conventional Phone Call." Be sure the radio is in a clear mode until communication is established, then select secure mode.

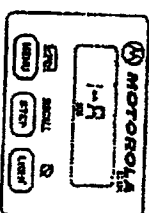
What to Do When Receiving a Phone Call

Trunked systems - display radios only

When you receive a phone call, you hear a ring very much like that of a telephone. Press the # () key to answer. (You can use the orange control button if it is programmed for telephone interconnect.) Then press the PTT switch to talk, release it to listen.



When your call is complete, press MENU () to hang up. (If press the orange control button if it is programmed for telephone interconnect.)

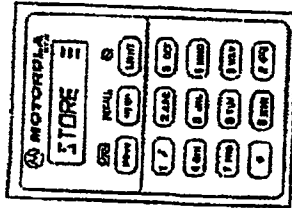


Call Alert, Private Conversation, and Telephone Conditions

Your radio can only receive a Call Alert, Private Conversation call, or a phone call if it is:

- turned on and in range of the system;
- currently on the same system as the caller; and
- not currently engaged in another conversation.

How to STORE Phone Numbers



display radios only

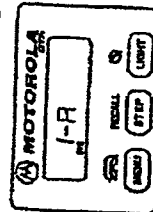
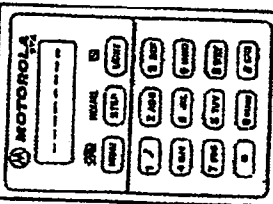
Note: You can "store" up to 9 phone numbers (each of which can have up to 18 digits) in the STX radio's memory. Your radio will also remember the last number dialed, even if it's not "stored" in one of the memory locations (1-9).

1. Press MENU until SUB is displayed.
2. Press 0 (STORE) until STORE is displayed (or STORE PH) is displayed.

3. Press the number (1-9) of the memory location where you want to store the phone number. If a number was previously stored in that location, it will be displayed. If no number is stored in the location, dashes will be displayed.

4. Press the buttons for the phone number you want to store. If you make a mistake, press STEP (RECALL) to back-space and erase.

5. Press MENU to store the number in the memory location you selected.



How to Store Access/Deaccess Codes for Conventional DTMF Phone

1. Select a conventional system.
2. Follow steps 1 and 2 above.
3. Press * to store an access code, or # to store a deaccess code.
4. Press the digits of the code to be stored, then press MENU.

3.4 How To Operate The STX Radio

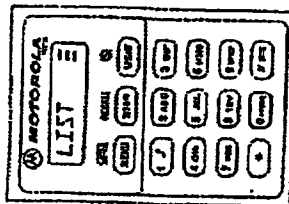
How to STORE Phone Numbers / How to Store Access/Deaccess Codes for Conventional DTMF Phone

How to LIST and Dial Stored Phone Numbers

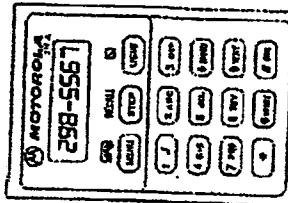
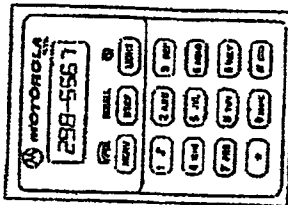
display radios only

1. In SUB, press 0 (STORE) until LIST is displayed.

Note: PH or Σ will be displayed.



2. Press the number (1-9) of the memory location that contains the phone number you want to see.

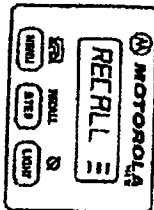


3. To dial the phone number, press # (END). After you get a dial tone, press STEP (RECALL), then the memory location number. You can also press 0 since the phone number you just displayed becomes the last number dialed if you go directly from LIST to phone mode.

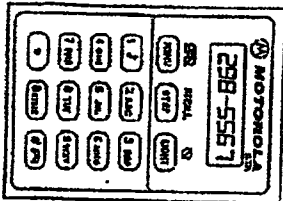
How To Operate The STX Radio | 35
How to LIST and Dial Stored Phone Numbers

MOT 000331
ATTORNEY'S EYES ONLY

How to Redial the Last Phone Number Dialed

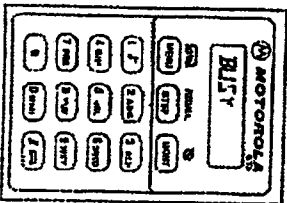


1. Press # (1) to get a dial tone. The last number dialed appears on the display.
2. Press STEP (RECALL) and RECALL is displayed.



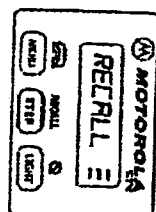
3. Press O (STORE) to dial that number.
CAUTION: If you are redialing a conventional phone call and had manually dialed the access/disconnect codes before, they become part of the last number dialed. The radio will redial all the digits, effectively accessing, picking the call and disconnecting in the same long dialing sequence.

How to Prepare to Dial a Stored Phone Number When the System is Busy

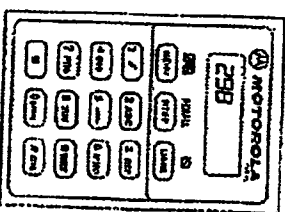


1. While **BUSY** is shown on the display, press STEP (RECALL) and the memory location (D-9) of the phone number to be dialed. The display will show the "queued" number.
2. The radio will wait for a dial tone and then automatically dial your number.
3. You can correct your choice before you get a dial tone by pressing another memory location number DC by pressing STEP (RECALL) to cancel your queued number.

How to Use the Display as a Scratchedpad

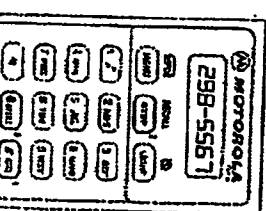


1. Press STEP (RECALL) and RECALL is displayed.



2. Press *, then press the numbers you want to put on the scratchpad. As each number is pressed, it will appear on the display.
3. Press MENU (END) to hang up. You will return to the system and substation/talk group you were in before making your phone call.

4. The scratched number becomes the "last number dialed" and is stored in the O (STORE) location. To call that number, press # (1) to get a dial tone. The number you entered on the scratchpad is displayed.
5. Press STEP (RECALL), then press O (STORE) to dial that number.



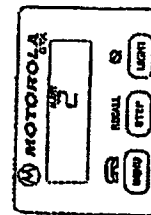
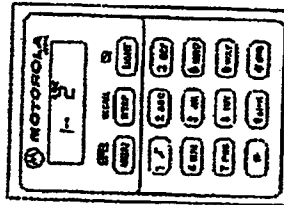
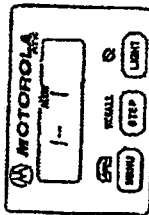
Suggestion: This is particularly useful when you're calling Directory Assistance.

How to Operate the STX Radio

How to Redial the Last Phone Number Dialed /
How to Prepare to Dial a Stored Phone Number When the System is Busy

How to Operate the STX Radio | 37
How to Use the Display as a Scratchedpad

How to Send a Call Alert (Page)



display radios only

If your radio has Call Alert encode, you'll be able to Call Alert (Page) any one of 9 different people whose radio identification numbers have been programmed into your radio.

1. Press MENU until ALERT is displayed.
2. In general, press the appropriate number (1-9) or use STEP to scroll to the radio ID while ALERT is displayed.
3. Press and release the PTT switch. If you hear a single beep, your Call Alert was sent but not received by the target radio; ALERT will flash on the display. If you hear 5 beeps, your Call Alert was received and your radio returns to SUB.

If you leave your radio in Call Alert (ALERT on the display), you will hear a constant low-pitched tone. This is to remind you that you may be missing dispatch calls.

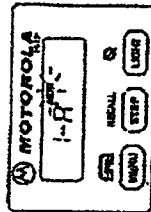
Note: If your radio is programmed with system and talk group alphanumeric names or direct alphanumeric names, only the number associated with the ID to be alerted will be displayed.

What to Do When You Receive a Call Alert (Page)

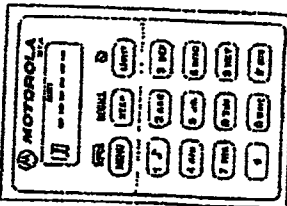
You will hear the repeating four "beep" Call Alert tone when you receive a Call Alert (Page). To acknowledge the Call Alert, press the PTT switch and transmit normally.

display radios

In addition to the Call Alert tone, ALERT will flash on the display when the Call Alert is received.



How to Send an Unlimited Call Alert (Page)



display radios only

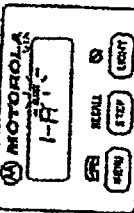
If your radio has Unlimited Call Alert, you'll be able to Call Alert (Page) any number of other people.

1. Press MENU and ALERT is displayed. You will enter see dashes or the ID of the last person you Call Alerted. To Call Alert the displayed ID, press and release the PTT switch.

2. To Call Alert a different person, enter their six-digit radio ID number. (All radios have six-digit IDs. You must enter a 0 for IDs that start with a zero.) If you make a mistake while entering the ID number, press STEP to backspace and erase.

If you have ID numbers stored (see How to STORE Six-Digit Radio Numbers), press STEP (RECALL) and the number of the stored ID will be displayed. Press and release the PTT switch.

3. When the number is complete, press and release the PTT switch. If you hear a "bong," the ID number entered is not valid. Re-enter a valid ID number.



4. If you hear a single "beep" and ALERT is flashing, your Call Alert was sent but not received by the target radio. Five "beeps" indicate that your Call Alert was sent and received and your radio returns to SUB.

How to Send a Private Conversation Call

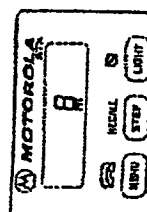
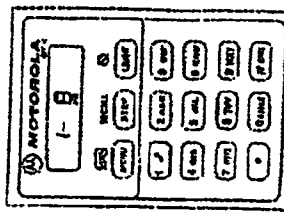
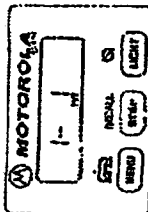
display radios only

Note: Private Conversation call select can take two forms; either you're able to privately call only one other person (Steps 2 and 3), or you can privately call up to eight different people, one at a time (Step 4).

1. If your radio has Private Conversation call select, press MENU until you see PVT displayed.

2. When you first move into Private Conversation call select, either a 1 or a blank is displayed above PVT unless you received a Private Conversation call earlier, in which case 0 is displayed. Your radio may be programmed to only call your supervisor. The radio will display "SUPERVISR".

3. In general, press the appropriate number (0-9) or use STEP to scroll to the next ID while PVT is displayed. Then press the PTT switch and begin your conversation. If a blank or "SUPERVISR" is displayed, just press the PTT switch to begin your conversation.



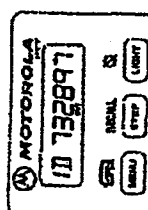
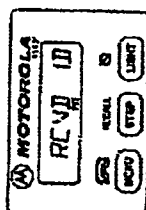
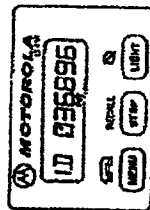
Note: If your radio is programmed with system and talk group alphanumeric names or direct alphanumeric mode names, only the number associated with the ID to be called will be displayed.

How to Send an Unlimited Private Conversation Call

display radios only

If your radio has Unlimited Private Conversation call select, you'll be able to talk privately with any number of other people.

1. Press MENU until you see PVT displayed; your STX radio is now in Private Conversation call select.
2. When you first move into private call, you will see either dashes or the six-digit radio ID number of the last person you privately called. To private call the displayed ID, press the PTT switch and begin your conversation.
3. If you previously received a private call, RCVD ID will appear on the display when you move into private call. To talk privately to the last person who called you, press the PTT switch while RCVD ID is displayed and begin your conversation.



Note: When operating on a Trunking Type II system, [STX 821 only] the received ID number from the private calling or call alerting person will be displayed.

4. To call a new ID, enter the six-digit radio ID number. Be sure to enter all six digits, including leading zeros. If you make a mistake, press STEP to backspace and erase. When the number is complete, press the PTT switch to talk. If you hear a "beep," the ID number is not valid.

5. If you have ID numbers stored (see How to Store Six-Digit Radio Numbers), press STEP (RECALL) and the memory location number (1-9) of the stored ID. Press the PTT switch to talk.

What to Do When Receiving a Private Conversation Call

display radios only

When you receive a Private Conversation call but your radio is not in PVT, you'll see PVT flashing on the display. You'll also hear the two "beep" Private Conversation alert tone.

Press MENU to move to PVT. Press the PTT switch to talk, release to listen.

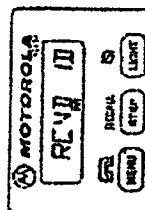
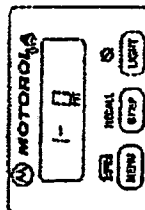
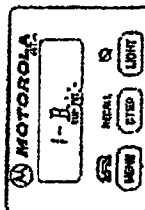
Note: If you don't move into PVT, you'll be talking to everyone in your subarea/talk group, instead of the private caller.

Your display will show 0 after you receive a Private Conversation call. This permits you to initiate a Private Conversation call to the person who last privately called you.

If you have unlimited Private Conversation call, you'll see RCVD ID on the display when you enter PVT mode.

Note: When operating on a Trunking Type II system, [STX 821 only] the received ID number from the private calling or call alerting person will be displayed.

CAUTION: In mixed systems [STX 821 radios only] with both Trunking I and Trunking II radios, received Trunking I radio's IDs will be displayed in the Trunking II format (according with 7). You can return a Trunking I radio's Private Call with this equivalent displayed ID number. However, to Call Alert a Trunking I radio, you must use the Trunking I format of the radio's ID. The equivalent Trunking II ID will not work when used to Call Alert a Trunking I radio.

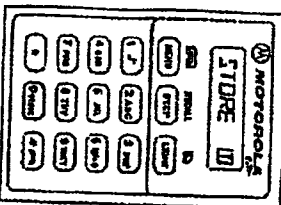


How to STORE Six-Digit Radio Numbers

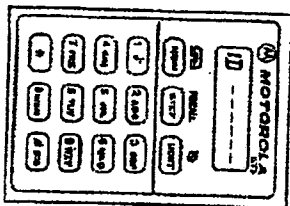
display radios only

You can store up to nine radio ID numbers for use in Private Conversation and Call Alert.

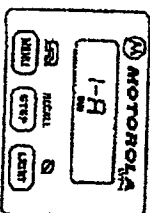
1. Press MENU until SUB is displayed.
2. Press 0 (STORE) and STORE ID appears on the display.



3. Press the number (1-9) of the memory location where you want to store the six-digit radio ID number. Dashes are displayed if no number is stored in the location. If a six-digit ID is already stored in that location, the stored ID number will be displayed.



4. Press the buttons for the six-digit radio ID number you want to store. Press STEP to backspace and erase if you make a mistake.
5. When the ID number is correct, press MENU to store the number in the selected location and return to your previous system and subface/talk group.

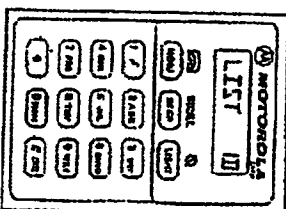


How to LIST and use Six-Digit Radio Numbers

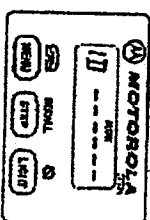
display radios only

1. In SUB, press 0 (STORE) and LIST ID is displayed.

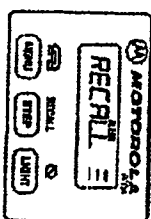
2. Press the number (1-9) of the memory location containing the six-digit radio ID you want to see.



3. To use the listed ID with either Call Alert or Private Conversation, press MENU until you are in the selection you want (ALERT or PVT displayed).



4. Press STEP (RECALL); RECALL will be displayed. Press the number of the location containing the radio number you want. If you want to call the last person that called you, press STEP (RECALL) and then 0, REND ID or the ID of the person who called you will be displayed.

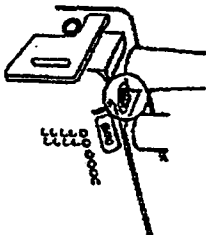


5. For Private Conversation, press the PTT switch and talk. For Call Alert, press and release the PTT switch. If you hear a 'bark', the stored ID is not valid.

How to Determine Your Radio ID Number

You can also see the six-digit radio ID number of your own STX radio. In SUB, press 0 (STORE) until LIST ID is displayed. Press 0 to see your own ID number.

Notes about Emergency Alarm and Emergency Call Operation

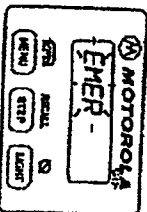
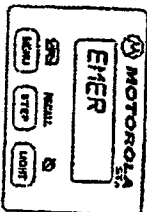


1. The Emergency signal can take two forms, Alarm or Call. Your STX may have either one or both. Emergency Alarm is for sending an alarm message to the dispatcher. Emergency Call is a priority type of talk group call, giving you priority channel access.
2. The Emergency signal can take place on your selected subface/talk group (actual operation) or on a pre-programmed subface/talk group (broadcast operation), depending on how your STX is programmed.
3. You may or may not be allowed to change your system or subface/talk group during Emergency operation, depending on the type of Emergency programmed into your STX. Standard Emergency does not allow system or subface/talk group changes during Emergency. Emergency by Talk Group does allow changes.
4. Emergency signals a critical situation. It should not be used for any other reason.

Standard Emergency Alarm

Sending an Alarm

To send an Emergency Alarm, press the orange control button on top of the STX. Five quick beeps mean that the alarm has been sent and was sent, but not acknowledged. The STX will continue to send the alarm until 1) it is acknowledged, 2) a pre-programmed number of beeps have failed, or 3) you end the alarm by transmitting or exiting Emergency mode. When the alarm is over, the STX will return to normal dispatch operation (STX) or drop into Emergency Call.



EMER or EMERGENCY will be displayed during Emergency Alarm. If the Alarm has not yet been acknowledged, the display will flash. If system and talk group alphanumeric names or direct alphanumeric mode names are programmed, EMERGENCY will alternate with the current alphanumeric system and subface/talk group names or mode names.

To exit Emergency operation, hold down the control button for one and a half seconds until you hear a tone, which tells you the STX has exited the Emergency mode.

If you hear an out-of-range tone when the control button is pressed and held, the STX "knows" that it is out of range of the base station. The STX will wait to send an alarm when it gets in range of the base station. By releasing the button before the one and a half second period, the STX will restart Emergency Alarm mode.

Silent Emergency Alarm

Emergency Alarm can be programmed to operate silently so that, in general, tones will be suppressed. To further ensure silence, the STX will remain muted in Emergency Alarm after the alarm is complete (if Emergency Call is not programmed). Otherwise, Emergency Alarm works as described above. Pressing PTT to transmit is an indication to the STX that you want to talk, and tones may again sound.

Notes: If the STX has the combination of Silent Emergency Alarm and Emergency Call, then after the alarm has finished, the STX moves into Emergency Call with tones no longer suppressed.

Emergency by Talk Group (Alarm)

The STX radio may also be programmed for Emergency by Talk Group. Emergency by Talk Group is similar to Standard Emergency Alarm, except that you can change subface/talk groups or systems during Emergency. If you change groups during Emergency, the Emergency options for the new group will take effect, including sending a new Emergency Alarm on that group if so programmed. Changing to a mode tone to sound and NO EMER to be displayed. The tone will sound until the STX will remain in the Emergency mode. Emergency by Talk Group is exited by the same manner as Standard Emergency.

EMER will be displayed and alternate with the selected system and subface/talk group indication. If system and talk group alphanumeric names or direct alphanumeric mode names are programmed, EMERGENCY will alternate with the alphanumeric system and subface/talk group names or mode names.

Emergency by Talk Group can be programmed to be silent, just as Standard Emergency. However, if ANY group in the radio is programmed to be silent, then ALL the other groups will also be silent. Otherwise, programming Emergency by Talk Group as silent has the same effects as Standard Emergency Alarm being silent.

Standard Emergency Call

If your STX is programmed with only Emergency Call, EMER will be solid on the display when the control button is pressed. If the STX went to Emergency Call after an alarm was sent, EMER may still be flashing to indicate that the alarm was not acknowledged.

Press PTT to request an Emergency priority channel assignment. While in Emergency Call, the STX will operate in a normal dispatch manner.

To exit Emergency operation, hold down the control button for one and a half seconds until you hear a tone, which tells you the STX has exited the Emergency mode.

Emergency By Talk Group (Call)

The STX radio may also be programmed for Emergency by Talk Group. Emergency by Talk Group is similar to Standard Emergency Call, except that you can change subgroups/talk groups or systems during Emergency. If you change groups during Emergency, the Emergency options for the new group will take effect, including sending a new Emergency Alarm on that group if so programmed. Changing to a conventional channel or a group without Emergency enabled will cause the Alarm mode tone to sound and NO EMER to be displayed. The tone will sound until the STX will remain in the Emergency mode. Emergency is again selected; however, the STX will remain in the Emergency mode. Emergency by Talk Group is exited in the same manner as Standard Emergency.

EMER will be displayed and alternate with the selected system and subdiast/talk group indication. If system and talk group alphanumeric names or direct alphanumeric mode names are programmed, EMERGENCY will alternate with the alphanumeric system and subdiast/talk group names or mode.

How to Send Your Status to the Dispatcher display radios only

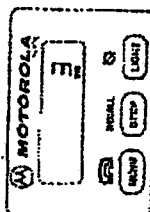
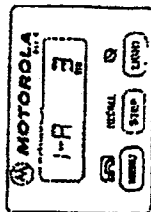
If the Status feature is programmed in your radio, you'll be able to send eight different pre-programmed status codes to the dispatcher. Ask your local system operator for the meaning of the different status codes.

Press MENU until STS appears. The display will show the last (current) status sent to the dispatcher. If you wish to change your status, select a new status using the STEP key or press the digit (1-8) of the status code you wish to send. When you've selected the status, press and release the PTT switch.

Notes: If you hear a single "beep" and STS is flashing, the status was sent but not received by the dispatcher. When you hear five "beeps" the dispatcher has received your status and the radio returns to SUB.

If you leave your STX radio in STS it will give a constant, low-pitched tone, reminding you that you may be missing dispatch calls.

Note: If your radio is programmed with system and talk group alphanumeric names or direct alphanumeric mode names, only the number associated with the status will be displayed.



How to Send a Message to the Dispatcher

display radios only

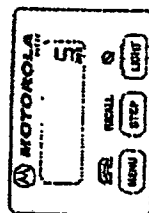
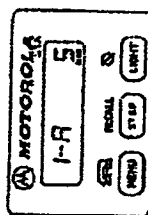
If the Message feature is programmed in your radio, you'll be able to send eight different pre-programmed messages to the dispatcher. Ask your local system operator for the meaning of the different messages.

Press MENU until MSG appears. Select a digit (1-8) of the selected message. When you've selected the message, press and release this PTT switch.

Notes: If you hear a single "beep" and MSG is flashing, the message was sent but not received by the dispatcher. When you hear five "beeps" the dispatcher has received your message and the radio returns to SUB.

If you leave your STX radio in MSG it will give a constant, low-pitched tone, reminding you that you may be missing dispatch calls.

Notes: If your radio is programmed with alpha system and talk group alphanumeric names or direct alphanumeric mode names, only the number associated with the message will be displayed.



50 How To Operate This STX Radio
How to Send a Message to the Dispatcher

How to Use System Search and Lock

display radios only

If your STX radio is equipped with System Search and Lock, your radio can find the best system available - even a conventional channel. If reception is noisy, you can force the radio to look for a better system. If your radio loses its home system, it will periodically try to find it again. It will still allow you to communicate on the secondary system.

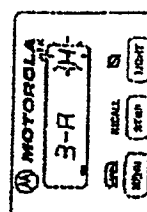
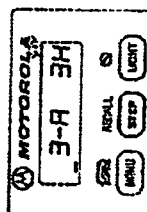
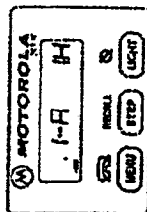
1. Press MENU until you see the bar (=) on the lower left of the display.
2. To turn on System Search, press and hold STEP until you hear a "chirp" and SRCH ON appears briefly on the display. Your home system number will then be displayed to the right of the system and subcall/task group, followed by the letter H (home). Each home system has its own list of systems to search.

You can continue to use the other functions of your radio normally. As long as you are in range of your home system, your STX radio will remain on that system. If you go out of range, the radio will look for a new system.

3. You can also force the STX radio to look for a new system. Press MENU until the bar (=) appears; then press and release STEP. The radio will look for the next system. Notice that the H on the display blinks while the radio is looking for a new system. The home system (at the right) does not change.

4. If you select a new system while the SYS annunciator is on, the currently displayed system becomes the new home system. (Note that the home system displayed at the right also changes.)

5. To turn System Search off, press MENU until the bar (=) appears. Press and hold STEP until SRCH OFF appears briefly on the display. The radio will return to the last selected home system and remain there.



How To Operate The STX Radio
How to Use System Search and Lock

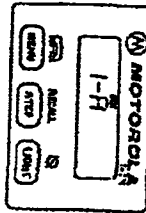
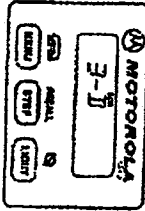
MOT 000339
ATTORNEYS'EYES ONLY

How to Use Scan

display radios only

If your radio has Scan, you'll be able to scan up to five different pre-programmed subfrequencies/talk groups plus your "home" subfrequency/talk group.

1. Choose your selected "home" subfrequency/talk group by using system and subfrequency/talk group select keys, press MENU until you see SCN on the display. Your selected subfrequency/talk group will still be displayed.
2. If a conversation is initiated on any of the subfrequencies/talk groups the radio is scanning, the system and subfrequency/talk group information will be displayed and you will be able to hear the conversation. Press the PTT while the subfrequency/talk group, subfrequency/talk group, if your radio is programmed with a scan talk back delay value.



3. If a conversation is initiated on a subfrequency/talk group other than your "home" subfrequency/talk group, you can temporarily delete it from your scan list by pressing STEP while the subfrequency/talk group letter is displayed. This is called "subfrequency delete." To be able to listen to that subfrequency/talk group again, you must leave SCN by pressing MENU. Continue pressing MENU until SCN appears again. The deleted subfrequency/talk group will be in the scan list once again.

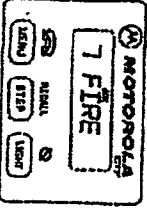
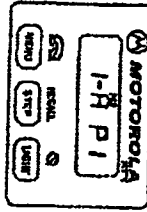
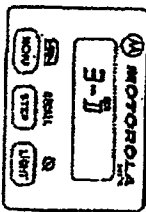
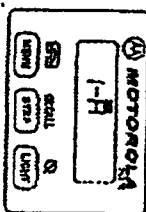
Notes: If your radio has the scan talk back delay programmed for zero seconds, then you may not talk back to the subfrequency/talk groups that you are scanning. You will talk on your home subfrequency/talk group. (This is programmable through the radio service software.)

How to Use Priority Monitor

display radios only

If your radio has Priority Monitor, you'll be able to scan your currently selected subfrequency/talk group plus up to five different preprogrammed subfrequencies/talk groups. Any of these can be your preprogrammed priority subfrequency/talk group.

1. Press MENU until SCN is shown on the display.
2. If a conversation is initiated on any of the subfrequencies/talk groups the radio is scanning, the display will show the subfrequency/talk group information and you will be able to hear the conversation. Press the PTT switch while the system and subfrequency/talk group letter is displayed to talk to the group displayed. If your radio is programmed with a scan talk back delay value.
3. If a conversation occurs in your priority group, your radio will automatically go to the priority subfrequency/talk group, even if you have been listening to another subfrequency/talk group. P1 will appear at the right of the display and the priority beep will be heard, if enabled.
4. When a conversation occurs and it is not in your priority subfrequency/talk group, or your group from your scan list by pressing STEP while the subfrequency/talk group letter is displayed. This is called "subfrequency delete." To be able to listen to that subfrequency/talk group again, you must leave SCN by pressing MENU. Continue pressing MENU until SCN is shown on the display again. The deleted subfrequency/talk group will be in the scan list once again.
5. When your STX 821 radio is programmed with system and talk group alphanumeric names, alphanumeric names of the active system and talk group will be shown. Priority is indicated by SCN flashing.
6. When your STX 820 radio is programmed with direct alphanumeric mode names, the mode name of the active system and talk group will be shown. Priority is indicated by SCN flashing.

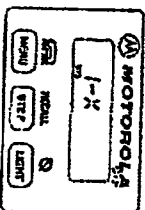


What Dynamic Regrouping Is and How It Works

Dynamic Regrouping allows the dispatcher to regroup radios normally on different subfrequencies/talk groups into a new special group (for example, during emergency situations). The dispatcher controls what group(s) you can talk with when you have been dynamically regrouped.

All dynamically regrouped radios are automatically cleared to the new dynamic regrouping subfrequency/talk group. When you have been dynamically regrouped you'll hear a distinct "gurgles" tone.

Note: A radio user may not notice that the dynamic regrouping feature was enabled until the radio has been dynamically regrouped.



display radios in general

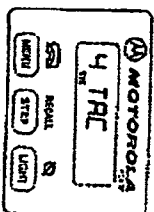
When your radio has been dynamically regrouped, you'll see an X in the subfrequency/talk group position.

If your radio is "select enabled," you can move in and out of the dynamic group to talk with someone on your home subfrequency/talk group or another subfrequency/talk group. Subfrequency X is added to your list of subfrequencies/talk groups. When you want to talk with your dynamic group, use STEP or the rotary knob to select subfrequency X. (You can still use your radio's other features in dynamic regrouping.)

If your radio is "select disabled," you cannot talk with any other subfrequency/talk group except the Dynamic Group (DG). You can still use status, message, or Call Alert (if your radio has it) and any conventional channels you may have available. No other trunked systems are available.

Whether your radio is select enabled or disabled, when the dynamic regroup command is cancelled the displayed X disappears, and the first subfrequency/talk group in your current system will be displayed (if your radio does not have a rotary talk group knob).

Note: If your radio is programmed with system and talk group alphanumeric names or direct alphanumeric mode names, then the alphanumeric name associated with the dynamic talk group will be displayed.



display radios with a rotary control

When you have been dynamically regrouped, you'll see a flashing X on your display. If you press the PTT switch while the X is flashing, you'll hear the "gurgles" tone, a reminder that you are talking with your dynamic group. By turning the rotary control to the dynamic subfrequency/talk group position, you eliminate the "gurgles" tone. If your radio is select enabled, you still can use any advanced features your radio is programmed to do. If your radio is select disabled, you can only use status, message, or CALL ALERT (if your radio has it) and any conventional channels you may have. No other trunked systems will be available.

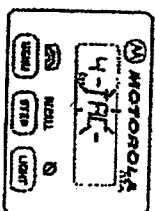
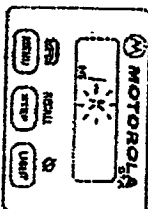
When the dynamic regroup command has been cancelled, the radio will indicate, by a constant low pitched tone, that you are still in that dynamic subfrequency/talk group position until you move to another position using the rotary control. If you were not in the dynamic regrouping position (and X was flashing), the proper subfrequency/talk group appears when the dynamic regroup command is cancelled.

(STX BCD radios only) If direct entry alphanumeric mode names are programmed, the dynamic mode name will be displayed flashing or non-flashing in the situations described above, corresponding to a system number followed by an X.

Note: (STX B21 radios only) If system and talk group alphanumeric names are programmed, the entire subfrequency/talk group name will flash in the situations described above, corresponding to a flashing X.

Basic rotary radio

When a basic rotary STX radio has been regrouped, you will hear the dynamic regroup tone ("gurgles") every time you press the PTT switch. By turning the rotary control to the dynamic subfrequency position, you eliminate the "gurgles" tone. When the dynamic regroup command has been cancelled, the radio will send a constant low pitched tone until you turn the rotary control to a different position.



How Reprogram Request Works with Dynamic Regrouping

display radios only

1. Reprogram Request is a way for you to tell the Dynamic Regroup console that you want a new dynamic grouping assignment.

To make a Reprogram Request, press MENU until you see **SLB** displayed. Press STEP until R is displayed (or press 7 twice). The display will show **RPGM**.

Next, (STX 821 radios only) if your radio is programmed with system and talk group alphanumeric names, then to make a reprogram request press STEP until **RPGM** is displayed or press 7 twice. The display will show **RPGM**.

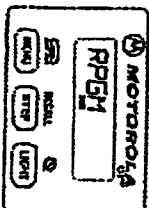
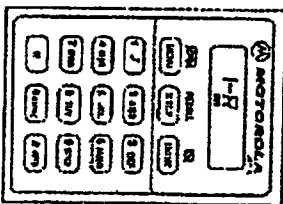
(STX 820 models only)

If your radio is programmed with Direct Alphanumeric Mode Names, then to make a reprogram request press 7 once while the current mode name is displayed. The display will show **RPGM**.

Press and release the PTT switch to send a signal to the Dynamic Regrouping console. You'll hear one "beep" if the trunked system received your request. When the Dynamic Regroup console acknowledges your request you'll hear four more "beeps". Then the best subless/talk group shown before the reprogram request will appear on the display.

If you leave your display on R, you'll hear a constant low-pitched tone, reminding you that you may be making dispatch calls.

If system and talk group alphanumeric names or direct alphanumeric mode names are programmed, pressing STEP once will return you to the last selected system and subless/talk group names or mode name before starting the reprogram request. If your request is acknowledged by the console the selected system and subless/talk group names will reappear automatically.



How to Use Automatic Multiple Site Selection (AMSS)

display radios only

If your radio has AMSS you can operate from up to eight sites in your area. With AMSS preprogrammed, your STX radio automatically tries to find the best site available. However, you can force it to look for another site.

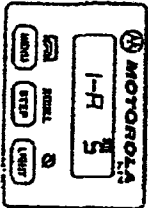
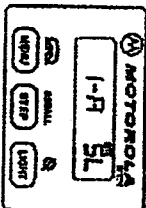
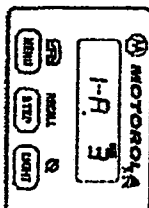
1. Press MENU until you see **SITE** on the display. The number under **SITE** is the current site. If you see a dash instead, your radio cannot find a site. Press STEP to force the radio to scan for another site.

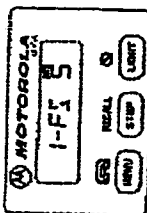
2. You can lock on to a site to keep your radio from scanning for another site. Press and hold STEP until you hear a chirp and see an L next to the site number. (Your radio will scan for another site if you press STEP briefly.) The lock position is remembered even when the radio is turned off.

3. To unlock and resume automatic scanning, press and hold STEP until you hear a chirp and L goes away.

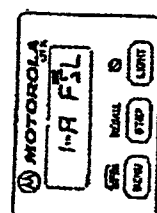
If one or more sites are in lockout you can still change sites. It may take several seconds as your radio first scans for a new trunking site before scanning for a new lockout site. (See "What Follows is and How it Works.")

Special Note About AMSS: If you have difficulty accessing the system, you may want to unlock your radio to allow it to find another site.

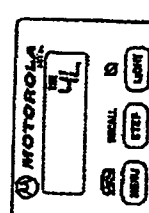




Special Note About AMSS: If your radio is programmed for Failsafe by announcement group then 1-F5 with the SITE number will be displayed.



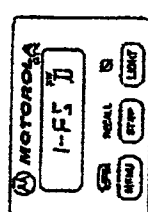
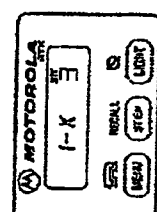
If your radio is programmed for failsafe by subselect/talk group then 1-A F5L will be displayed. L will only appear if you are locked on this site.



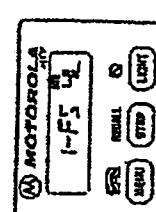
Note: If your radio is programmed with system and talk group alphanumeric names or direct alphanumeric mode names, only the number associated with the selected site and its lock status will be displayed.

How AMSS Works with Dynamic Regrouping in Failsafe display radios only

If your radio has AMSS and you have been dynamically regrouped (see "What Dynamic Regrouping Is and How It Works"), you'll see an X in the subselect/talk group position and site selection will operate normally. However, if one or more sites are in failsafe, the subselect/talk group position will show F5 and the site position will display a Q. This is the only site available during failsafe dynamic regrouping.



Note: The site selection feature still apparently functions during failsafe, as explained in AMSS. The radio will attempt to lock on to a new site for approximately 18 seconds before reverting to the 5 failsafe dynamic regroup.



Note: For Trunking II, if your radio is programmed for failsafe by subselect/talk group then 1-F5 will be displayed with the current SITE number. L will only appear if you are locked.

Background Information on Trunked Systems

A microprocessor in the STX radio controls functions within a Motorola Trunked Radio System. A trunked system uses repeater channels to create a communications path. Each system contains up to 20 repeater channels, depending on system requirements.

The control controller, the main control unit of the system, uses one of the repeater channels as a dedicated control channel. This control channel is the link between the control controller and radios in the system. The control controller continuously transmits information to all radios, consisting of timing signals to keep radios synchronized to the control controller and identification signals to identify the control channel. All radios automatically monitor the control channel when there is no voice traffic and are silent until summoned by the control controller.

A typical system might consist of a certain number of radio units operating within an organized group, known as an announcement group or fleet. Each announcement group can be segmented into independent subfleet/talk groups. This segmentation allows the announcement group to be organized into predetermined talk groups according to function. Members of a talk group hear only those messages intended for that group. Announcement calls will be heard by all talk group members belonging to the same announcement group.

Once a voice channel has been assigned, the control controller assigns the same voice channel to all subfleet/talk group members, which allows other members to join communications already in progress.

If the control controller receives a voice channel request from a radio on another subfleet/talk group, it assigns that radio and its subfleet/talk group to an unoccupied voice channel (when one becomes available). This action will not affect or disrupt communications already in progress on other occupied voice channels.

Because no two groups will be assigned the same channel at the same time, interference is eliminated and priority ensured. You don't need to make repeated attempts to gain system access. If all channels are busy, the STX radio gives a busy tone. When a channel becomes available, your radio is assigned to that channel automatically and you hear a talk permit tone.

A key feature of the STX radio is its dupl operation: you can maintain communications access to conventional and/or trunked systems as required. With the STX radio you get the many advantages of a trunked system. At the same time conventional operation lets you maintain communication even when you're left the trunked system's range.

Communication "trunking" has one main goal: to improve a system's efficiency by sharing its resources among many users.

Secure Operation

The secure feature of the SMARTNET STX radio provides a communications link of unparalleled privacy with other SECURENET™ equipment. The resulting airwave traffic from such a link, in the form of encrypted data, is intelligible only to other secure-equipped units programmed with the same key as your radio. Changing the radio's digital key word is a simple operation which involves entering a new sequence of characters into a handheld key variable loader, making it to the radio side connection, and entering the key loader. Available for both trunked and conventional operation, the secure feature provides the latest in voice encryption methods available today, giving you the utmost airwave privacy required in many of today's secure communications systems.

Battery Information

The STX radio operates with either a medium or high capacity rechargeable nickel-cadmium battery. This battery is a safe, dependable power system specifically designed for use in the STX radio. For more information on your battery and its care, write to Battery Department, Motorola Inc., 8000 W. Sunrise Blvd., Ft. Lauderdale, FL 33322-8894.

To make sure you get optimum capacity and performance, you should always recharge your battery before using it.

Charging Times

Charging Time for Typical Charger/Battery Combinations

Battery Model No.	Chargers	
	Slow	Rapid
NTN1014A	NTN1013A	NTN1013A
NTN1012A	NTN4832A	NTN1011A
NTN4329A, NTN4834A	14 Hours	2 Hours
NTN4827B, NTN4830A	14 Hours	2 Hours

WARNING: Do not replace the battery in a hazardous atmosphere and never discard used batteries in fire; an explosion may result.

Important Note: All secure-equipped radios are designed to quickly destroy key if the battery is removed while the radio is turned ON. If the radio is turned OFF when the battery is removed the key will be retained for at least 30 seconds, allowing you time to replace a low battery with a freshly charged one.

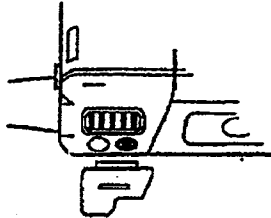
Accessories

Accessory Instruction

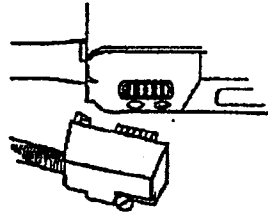
A cable and plug connect the accessory external speaker-microphones to the accessory connector on the side of the STX radio.

A dust cover, to protect the accessory connector contacts, is shipped with the radio and should be installed on the radio whenever the connector is not in use with an accessory.

1. Remove the dust cover from the accessory connector by gently prying up the cover. Save it for later use.



2. Fit the microphone plug in into the groove on top of the radio. Pivot the plug into the connector and tighten the screw.



CAUTION: Although the accessory connectors for other Motorola radios are similar in appearance to those designed for the STX radio, they are not compatible. Your radio will not operate properly if you try to use them.

List of Accessories

Motorola offers a wide variety of accessories to increase communications efficiency and effectiveness. Contact a Motorola sales representative for complete information on the entire line of available accessories.

The following accessories have been designed for use with the STX radio.

Audio Accessories

NAF8000 Public Safety Alarm Microphone, Single Cord & Pouch CPO
NAF8000 Public Safety Alarm Microphone, Single Cord & Pouch CPO
NAF8142 Remote Speaker Microphone, Corded Cord
NTN1011 LCD Speaker Microphone
NTN4684 Surveillance Accessory
NTN4742 Earpiece Adapter
NAF8000 Safety Helmet Headset
NAF875A01 Headset Adapter

Carry Accessories

NTN4670 Nylon Hold-down Strap
NTN4671 Carry Case Cover
NTN4680 Standard Carry Holder with Side Loop
NTN4688 Single Case with Velcro for Medium Capacity Battery
NTN4689 Single Case with Velcro for High Capacity Battery

Batteries

NTN4906 Medium Capacity Battery
NTN4934 Freely-Settable Medium Capacity Battery
NTN4927 High Capacity Battery
NTN4900 Intrinsically Safe High Capacity Battery

Battery Chargers

NTN1011 Rapid Single-Line Charger, 117V
NTN4831 Rapid Multi-Line Charger, 117V/220V
NTN1018 14-hour Single-Line Charger, 117V
NTN4832 14-hour Multi-Line Charger, 117V/220V
NTN1012 Rapid Single-Line Charger, 220V
NTN1014 14-hour Single-Line Charger, 220V
NTN4127 Wall Mount Kit
NTN4128 Rack Mount Kit

Battery Packs

DS30 Key Variable Loader
DS30 Key Variable Loader
DS30 Key Variable Loader
DS30 Key Variable Loader
DS30 Key Variable Loader

Antennas

NAF4000 Dipole Antenna
NAF4000 Whip Antenna

Accessories

NT352 Converter-Cord Console
NT353 15Watt RF Amplifier

General Radio Care

Cleaning Procedures

You can clean the external surfaces of the STX radio with a mild detergent solution. A suitable detergent solution may be mixed by adding one teaspoon of mild dishwashing detergent to one gallon of water (0.5% solution). This is the only recommended cleaning agent for the external radio surfaces. Cleaning the radio with solvents or abrasives may be harmful and permanently damage the radio housing.

Apply the detergent-water solution sparingly with a soft, non-metallic, sharp-bristled brush to work all loose dirt away from the radio. A soft, absorbent, lint-free cloth or tissue should then be used to dry the radio. Make sure no water remains entrapped near the connectors in any crevices or cracks.

Clean all battery contacts with a lint-free cloth to remove dirt, grease, or other foreign material that may prevent good electrical connections.

Operating Hints

If you experience operating difficulties:

1. Review the appropriate steps in the operating procedures for the STX radio.
2. Check to see that your radio's battery is charged.
3. If transmission quality is poor, check the antenna. It must be undamaged and held in an upright position for maximum range.
4. If you have trouble accessing the system, try different operating locations.

Service Information

If you should have any operational difficulties, report them to authorized maintenance personnel. Proper repair and maintenance procedures will assure efficient operation and long life for your STX radio. A Motorola maintenance agreement will provide this at a minimum cost. Motorola will provide expertly trained personnel to keep all your two-way radio equipment in perfect operating condition.

Safety Information

The Federal Communications Commission (FCC), with its action in General Docket 78-144, March 19, 1985, has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC-regulated equipment. Proper operation of this radio will result in user exposure substantially below the FCC recommended limits. Motorola subscribes to the same safety standard for use of its products.

DO NOT hold the radio such that the antenna is very close to, or touching, exposed parts of the body, especially the face or eyes, while transmitting. The radio will perform best if the microphone is two or three inches away from the lips and the radio is vertical.

DO NOT hold the transmit (PTT) switch on when not actually desiring to transmit.

DO NOT allow children to play with any radio equipment containing a transmitter. DO NOT operate a portable transmitter near unshielded electrical bleeding caps or in an explosive atmosphere unless it is a type especially qualified for such use.



Hazardous Atmosphere Operation

Factory Mutual Nonhazardous and Intrinsically-Safe Approved Models:

The STX portable radio, properly equipped with the H7B3 Option, is approved by Factory Mutual Research Corp. (FM/RC) as intrinsically safe for use in Classes I, II, and Division 1, Groups C, D, E, and F. This option provides a radio/battery combination and a label which lists the Class/Division/Group, and verifies the radio as being FM approved. In addition, meeting green dots will be visible on the back of the radio and on the battery to insure proper identification of FM approved units.

The Intrinsically Safe rating by Factory Mutual states that electrical equipment is incapable of releasing sufficient electrical or thermal energy under normal or abnormal operating conditions, to cause ignition of specific hazardous atmospheres designated on the radio label.

WARNING: Substitution of components may impair the intrinsic safety of the radio.

Note: Radios must ship from the Motorola factory equipped with the hazardous atmosphere options; they cannot be modified in the field.

Note: Failure to use the radio with the approved battery will negate the FM approval. STX Factory Mutual approved radios can be used in those applications requiring reliable, two-way, handheld radios in the listed specific hazardous atmospheres. Motorola approved equipment and accessories are listed in the approval guide published yearly by Factory Mutual Research Corp.

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General Radio Care
Safety Information /
Hazardous Atmosphere Operation

Intrinsically Safe Accessories

The following accessories are approved as Intrinsically Safe by Factory Mutual Research Corp. Refer to the radio label for intrinsic safety ratings and required batteries. Only the accessories, batteries, and antennas listed below may be used on approved radios.

Audio Accessories

NMFBDSOC	Public Safety Antenna Microphone, Straight Coiled Cord & Pocket Clip
NMFBDSOC	Public Safety Antenna Microphone, Straight Coiled Cord & Velcro Patch
NMNB175A	Remote Speaker Microphone w/Earphone Jack, Coiled Cord
NMNB177A	Remote Speaker Microphone, Coiled Cord
NMNB177A	Surveillance Accessory
NMNB1742A	Earpiece Adapter
NMNB175A	Safety Helmet Headset
NMNB175A	Headset Adapter
NMNB175A	Public Safety Speaker Microphone

Batteries

NTN432B	Medium Capacity Battery
NTN433A	Intrinsically Safe Medium Capacity Battery
NTN4327	High Capacity Battery
NTN4500	Intrinsically Safe High Capacity Battery

Antennas

NMF4000B	Dipole Antenna
NMF4000A	Whip Antenna

Options

H108AE	Replace Dipole Antenna with Whip Antenna
H7B3CU	FM Approval with Medium Capacity Battery
H7B3CM	FM Approval with High Capacity Battery
H224AK	Medium Capacity Battery
H226AN	High Capacity Battery
H7B3AA	DVXL Encryption
H7B3AA	DEB-XL Encryption
H7B7AA	DVP-XL Encryption

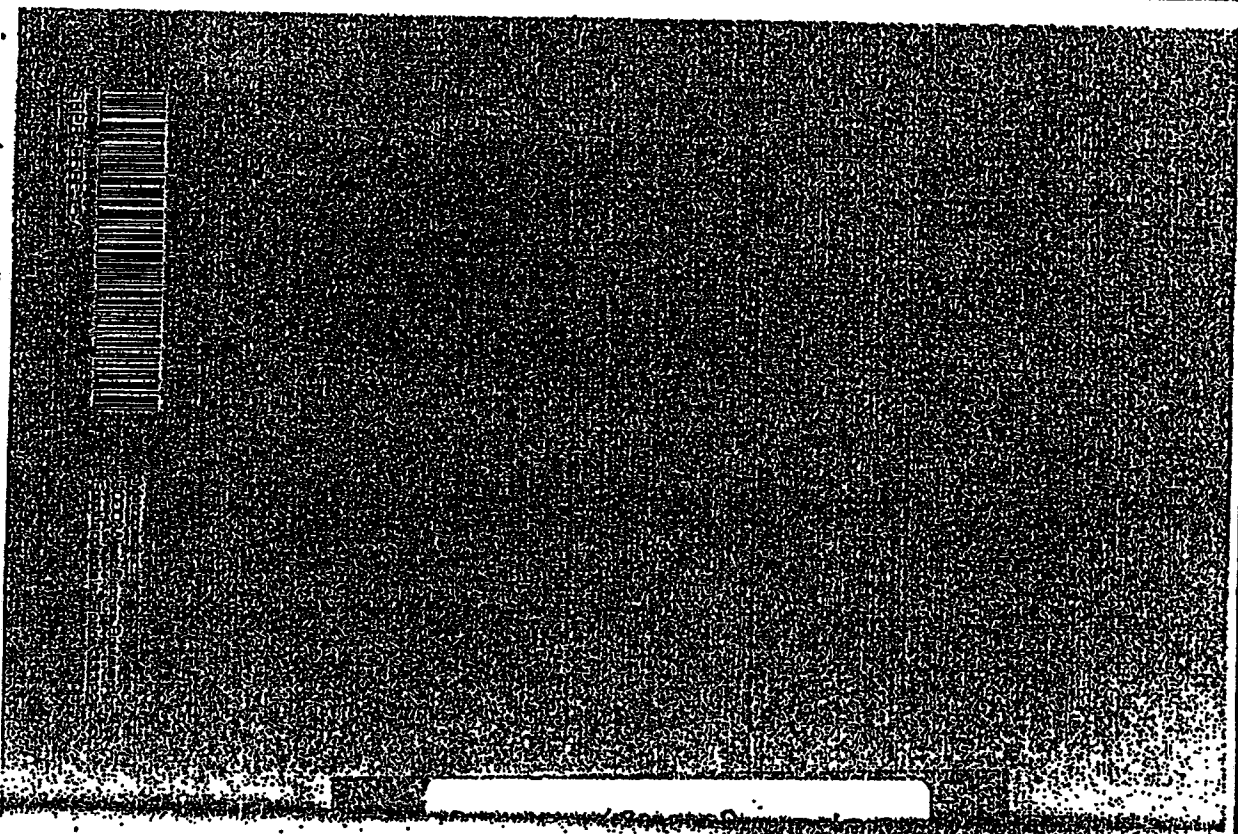
General Radio Care | 87
Intrinsically Safe Accessories

MOT 000347
ATTORNEYS EYES ONLY

The Motorola products described in this manual may include copyrighted Motorola computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted computer programs, including the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Motorola computer programs contained in the Motorola products described in this manual may not be copied or reproduced in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant, either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent application of Motorola, except for the normal non-exclusive royalty-free license to use that arises by operation of law in the sale of a product.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

MOT 000348
ATTORNEYS' EYES ONLY



MOT 000349
ATTORNEY'S EYES ONLY

Opposer's Exhibit 10

documents, things, or information (to the extent otherwise discoverable) upon entry by the Board of a suitable protective order.

(D) Applicant objects to Opposer's "Instructions" and "Definitions" to the extent they attempt to impose on Applicant obligations that are greater than, different from, or inconsistent with Applicant's obligations under the Federal Rules of Civil Procedure, the Trademark Rules of Practice, or decisional law.

(E) A response stating that Applicant will produce/provide responsive documents, things, or information is not a representation that any responsive document, thing, or information necessarily exists.

(F) Applicant objects to Opposer's discovery requests to the extent they request documents or information that are not relevant to the subject matter of this proceeding, that are overly broad, vague, ambiguous, or that impose an undue burden on Applicant.

(G) To the extent Applicant states that it will produce/provide responsive documents, things, or information, it will produce/provide such documents, things, or information as they exist and can be located after a reasonable search of documents, things, and information within Applicant's possession, custody, or control.

(H) Applicant's inadvertent disclosure or production of documents, things, or information protected by the attorney-client privilege, the work product immunity doctrine, or any other applicable privilege or doctrine is not intended to be and shall not be construed to be a waiver of the privilege or doctrine.

(I) Applicant's responses are based on Applicant's present knowledge, belief, and investigation to date. Applicant reserves the right to modify or supplement its responses.

REQUESTS

1. All documents and things identified in response to Opposer's First Set of Interrogatories to Applicant.

RESPONSE TO NO. 1:

Subject to the General Objections set forth above and to each objection set forth in Applicant's interrogatory responses that identify documents and things, Applicant will produce documents and things responsive to this Request.

2. All documents and things relating to how Applicant promoted, promotes, or will promote, offered for sale, offers for sale, or will offer for sale, any goods associated with the 911 Hz Tone (including the 911 Hz Tone Products).

RESPONSE TO NO. 2:

Subject to the General Objections set forth above, Applicant will produce documents and things responsive to this Request.

3. All documents that evidence how Applicant used, uses, and will use the 911 Hz Tone in any way (including advertising, labels, packaging, displays, and promotion).

RESPONSE TO NO. 3:

Subject to the General Objections set forth above, Applicant will produce documents responsive to this Request.

4. All surveys conducted by Applicant regarding the 911 Hz Tone.

RESPONSE TO NO. 4:

Subject to the General Objections set forth above, none.

5. All surveys conducted by Applicant regarding the 911 Hz Tone Products.

RESPONSE TO NO. 5:

Subject to the General Objections set forth above, none.

6. All licenses, franchise agreements, correspondence relating to enforcement, and settlement agreements regarding the 911 Hz Tone.

RESPONSE TO NO. 6:

Subject to the General Objections set forth above, none.

7. All licenses, franchise agreements, and settlement agreements regarding either the 911 Hz Tone Products.

RESPONSE TO NO. 7:

Subject to the General Objections set forth above, none.

8. All documents concerning Opposer and the 911 Hz Tone.

RESPONSE TO NO. 8:

Subject to the General Objections set forth above, Applicant will produce documents responsive to this Request.

9. All documents concerning or referring to Application Serial No. 78/235,618.

RESPONSE TO NO. 9:

Subject to the General Objections set forth above, Applicant will produce documents responsive to this Request.

10. All documents concerning any opinions, written or oral, as to the registrability, validity, use, enforceability, or infringement of the 911 Hz Tone, including all documents used or considered in the preparation and formulation of any such opinions.

RESPONSE TO NO. 10:

Subject to the General Objections set forth above, none.

11. All documents describing Applicant's policies and procedures regarding the destruction or retention of documents.

RESPONSE TO NO. 11:

Subject to the General Objections set forth above, Applicant will produce documents responsive to this Request.

12. All documents or things upon which Applicant intends to rely upon in this proceeding.

RESPONSE TO NO. 12:


In addition to the General Objections set forth above, Applicant objects to this Request as being premature.

13. A representative sample of each product identified in response to Interrogatory No. 12 of Opposer's First Set of Interrogatories to Applicant.

RESPONSE TO NO. 13:

Subject to the General Objections set forth above, Applicant will produce one or more products responsive to this Request.

Dated: April 12, 2005



John T. Gabrielides
Elisa M. Valenzona
BRINKS HOFER GILSON & LIONE
455 N. Cityfront Plaza Drive, Suite 3600
Chicago, Illinois 60611-5599
Telephone: (312) 321-4200
Facsimile: (312) 321-4299

Attorneys for Applicant

Opposer's Exhibit 11

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)
)
Opposer,)
)
v.)
)
MOTOROLA, INC.,)
)
Applicant.)

Opp. No.:	91/161,817
App. No.:	78/235,618
Pot. Mark:	SENSORY MARK (911 Hz Tone)

EXHIBIT 11

**IS NOT BEING
REPRODUCED HEREIN
AS IT IS IDENTICAL TO
MOTOROLA'S EXHIBIT 12**

Opposer's Exhibit 12

Introduction

Alert Tones

An alert tone is a sound or group of sounds. Your radio uses alert tones to inform you of your radio's conditions. The following table lists these tones and when they occur.

<i>Sound</i>	<i>Tone Name</i>	<i>Occurs:</i>
Short, Low-Pitched Tone	Invalid Key-Press	When the wrong key is pressed.
	Radio Self-Test Fail	When the radio fails its power-up self test.
	No ACK Received	When the radio fails to receive an acknowledgement from the dispatcher.
	Reject	When an unauthorized request is made.
	Time-Out Timer Warning	Four seconds before time out.
Continuous, Low-Pitched Tone	Time-Out Timer Timed Out	After time out.
	Talk Prohibit/PTT Inhibit	When the PTT button is pressed and transmissions are not allowed.
	Out-of-Range	When the PTT button is pressed and the radio is out of range of the system.
	Invalid Mode	When the radio is on a channel that is not programmed.
	Individual Call Warning Tone	When the radio is in an individual call for greater than six seconds without any activity.
A Group of Low-Pitched Tones (Busy Tone)	Busy	When a channel, phone line, or system is unavailable due to high traffic volume.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)
)
Opposer,)
)
v.)
)
MOTOROLA, INC.,)
)
Applicant.)

Opp. No.:	91/161,817
App. No.:	78/235,618
Pot. Mark:	SENSORY MARK (911 Hz Tone)

EXHIBIT 2

to

**OPPOSER'S OPPOSITION TO APPLICANT'S
MOTION FOR SUMMARY JUDGMENT**

CONFIDENTIAL - ATTORNEYS' EYES ONLY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

-----X
NEXTEL COMMUNICATIONS, INC., :
Opposer :
v. : App. No. 78/235,618
MOTOROLA, INC., :
Applicant :
-----X

Deposition of ALLISON O'REILLY

Washington, D.C.

Tuesday, July 26, 2005

9:05 a.m.

Job No.: 22-60399

Pages 1 - 65

Reported by: Nancy Bond Rowland

1 Deposition of ALLISON O'REILLY, held at the
2 offices of:

3
4 Crowell & Moring
5 1001 Pennsylvania Avenue, N.W.
6 Washington, D.C.
7

8 Pursuant to agreement, before Nancy Bond
9 Rowland, Registered Professional Reporter and Notary
10 Public in and for the District of Columbia.
11
12
13
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17
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25

A P P E A R A N C E S

ON BEHALF OF OPPOSER:

MICHAEL H. JACOBS, ESQUIRE
WILLIAM J. SAUERS, ESQUIRE
CROWELL & MORING
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 624-2500

ON BEHALF OF APPLICANT:

THOMAS M. WILLIAMS, ESQUIRE
BRINKS, HOFER, GILSON & LIONE
NBC Tower - Suite 3600
455 N. Cityfront Plaza Drive
Chicago, IL 60611-5599
(312) 321-4200

ALSO PRESENT: Cindy Lin

P R O C E E D I N G S

ALLISON O'REILLY

having been duly sworn, testified as follows:

EXAMINATION BY COUNSEL FOR APPLICANT

BY MR. WILLIAMS:

Q Good morning, Miss O'Reilly. I'm Tom Williams. I'm here on behalf of Motorola.

Could you please state your name for the record?

A Allison Scherry O'Reilly.

Q Do you have any maiden names or other names you've gone by over the years?

A My maiden name is Scherry.

Q Okay. What's your address?

A Home?

Q Yes.

A 1178 Randolph Road, McLean, Virginia 22101.

Q And your business address?

A 2003 Edmund Halley Drive, Reston, Virginia 20191.

Q Have you ever testified at a deposition before?

A I have not.

Q Have you ever testified at a trial before?

A I have not.

1 Q When did you have those discussions?

2 A Again, starting in March of 2005.

3 Q Did you do any research to prepare to testify
4 in these categories?

5 A Again, I spoke to the competitive
6 intelligence team, but other than that, just knowledge
7 that I'm aware of.

8 Q Did you specifically refer to any documents
9 in response to these 21 paragraphs?

10 A No.

11 Q You had conversations with the competitive
12 intelligence people and the lawyers?

13 A Yes. If I had a question or something that I
14 was not the expert at, I did reach out, but again did
15 not share why I was looking for that information.

16 Q Who did you reach out to?

17 A The trade show team to gather the trade show
18 information.

19 Q Anyone else?

20 A I don't believe so.

21 Q How about sales and advertising numbers, did
22 you reach out to anyone to discuss those topics?

23 A Well, sales are not within my team. Yes, I
24 did. I reached out to someone in finance, Janine
25 Rubitski.

1 A It was MindShare.

2 Q Did they give you any documents?

3 A They did.

4 Q What did those documents contain?

5 A Media spend by year.

6 Q Media spend for what products?

7 A Oh, again it's just Nextel in general. We
8 don't categorize by product.

9 Q Does Nextel use any other advertising
10 agencies other than MindShare?

11 A MindShare is our media agency. We have
12 Chiat/Day which is our creative agency.

13 Q Did you speak with anyone from that agency?

14 A I did not.

15 Q Can you think of anyone else you would have
16 spoke to or reached out to other than the sales and
17 finance people, the trade show team, and the MindShare
18 people?

19 A I may have reached out to the public sector
20 team to understand their attendance at any shows which
21 may not have been captured under trade shows.

22 Q Did you speak with the public sector team
23 about anything other than trade shows?

24 A I did not.

25 Q Who did you speak to at the public sector

1 team?

2 A I believe it was Diana Bibb.

3 Q Is she at the same address?

4 A She is.

5 Q Did she give you any correspondence, any
6 printed materials?

7 A A list of shows that we attend, that she
8 attends.

9 Q Do you recall how far back that list
10 stretched?

11 A I believe it was for the last two years.

12 Q Did you speak with her about anything other
13 than the trade shows?

14 A I did not.

15 Q Did you ask her whether Motorola was at these
16 trade shows?

17 A I did not.

18 Q Did you discuss Motorola with her at all?

19 A I did not.

20 Q When did you have that conversation with Miss
21 Bibb?

22 A Most likely it was in the March time frame as
23 well.

24 Q Is she still with the company to your
25 knowledge?

1 MR. JACOBS: Object to the extent it calls
2 for a legal conclusion, but you can answer.

3 A We've not seen or been made aware of any in
4 commerce, again I'm following the language here, use in
5 any marketing or advertising.

6 Q Has Nextel researched that?

7 A Not per se.

8 Q Has Nextel done any market studies on that
9 topic?

10 A No other than attendance at trade shows or
11 seen anything that would have been brought to the
12 attention of the marketing communications group.

13 Q Has Nextel done any focus groups?

14 A No.

15 Q Any customer interviews?

16 MR. JACOBS: This is with respect to the
17 tone, the 911 hertz tone?

18 MR. WILLIAMS: Correct.

19 A No.

20 Q Any survey work with respect to the 911 tone?

21 A No.

22 Q Have any experts been consulted with respect
23 to the 911 survey tone?

24 MR. JACOBS: Objection to the extent it calls
25 for attorney-client or work product communications, but

1 MR. JACOBS: Objection to the extent it calls
2 for a legal conclusion. Go ahead.

3 A Nextel uses tones to promote its features and
4 services, and if Motorola gets the exclusive rights
5 without showing that they've really used it, then it
6 prevents Nextel from being able to use those tones in
7 the future if they so wish.

8 Q When you said that Motorola hasn't used it,
9 what do you mean by that?

10 A Well, again, we haven't seen usage in
11 advertising or marketing initiatives promoting the
12 tone.

13 Q Has Nextel looked for such usage?

14 A Not per se other than what people in certain
15 departments would have shared with us of any
16 information.

17 Q I believe you said that Nextel uses tones to
18 promote its features and services, is that correct?

19 A Yes.

20 Q Which tones would those be?

21 A The Nextel chirp.

22 Q And that was the 1800 chirp you referred to?

23 A Yes.

24 Q And how does Nextel use those tones to
25 promote its features and services?

1 Q What's the difference between brand and
2 promotional television?

3 A Again, one has an offer, and one is more
4 about the Nextel brand in general.

5 MR. WILLIAMS: Let's take a short break.

6 (Recess)

7 BY MR. WILLIAMS:

8 Q Can I draw your attention back to Exhibit 2
9 please. This is the Notice of Deposition pursuant to
10 Rule 30(b)(6). Will you please read paragraph 1 to
11 yourself, and let me know when you're done.

12 A Yes.

13 Q Which facts does opposer base its contention
14 that Motorola has not used the 911 tone in commerce in
15 connection with its two-way radios?

16 MR. JACOBS: Objection to the extent it calls
17 for a legal conclusion.

18 A We would have been in my role within Nextel
19 and supporting a variety of marketing efforts, had
20 Motorola been advertising and marketing the tone or the
21 mark, we would have been made aware from the various
22 groups, for example, the public sector group.

23 Q If you had to prove today that that tone
24 wasn't used as a mark, what facts would you rely on?

25 MR. JACOBS: Objection to the extent it calls

1 Q When you say using it in the future, what are
2 you referring to?

3 A Well, for example, we use a sound today. We
4 use a few sounds, mostly the Nextel chirp.

5 Q What other sounds are you referring to other
6 than the chirp?

7 A There could be a sound in GPS, but the sound
8 we use most is the Nextel chirp.

9 Q Are there other sounds on the drawing board
10 to your knowledge?

11 A No.

12 Q Moving on to paragraph 5, will you read that
13 and let me know when you're finished.

14 A Okay.

15 Q Who do you understand to be the purchasers of
16 Motorola's products that emit the 911 tone?

17 A I believe it would be the public sector,
18 police, fire departments.

19 Q How do you know that?

20 A Because you see those people using them.

21 Q Did you talk to anyone about that?

22 A No.

23 Q Are there any Nextel documents that you're
24 aware of relating to Motorola purchasers for the
25 two-way radio products?

1 A Correct.

2 Q But the Nextel handsets have that Direct
3 Connect feature?

4 A Yes. We purchase phones from Motorola that
5 include a two-way radio.

6 Q Would you call those products a two-way
7 radio?

8 A No.

9 Q Would you call it a handset?

10 A We call it a handset or a phone that happens
11 to have other capabilities.

12 Q Does Nextel market their handsets to the
13 public sector?

14 A Yes.

15 Q How does it do that?

16 A Again, I'm not in sales, but trade shows. We
17 run ads in magazines, but again I'm not in sales.

18 Q Do you know any particular magazines?

19 A I don't.

20 Q Any particular trade shows?

21 A I don't per se, no.

22 Q Does Nextel have in-house representatives who
23 would speak with public sector customers?

24 A Salespeople.

25 Q And would they go directly to a public sector

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)	
)	
Opposer,)	
	)	Opp. No.: 91/161,817
v.	)	App. No.: 78/235,618
	)	Pot. Mark: SENSORY MARK
MOTOROLA, INC.,	)	(911 Hz Tone)
)	
Applicant.)	
)	

EXHIBIT 3

to

**OPPOSER'S OPPOSITION TO APPLICANT'S
MOTION FOR SUMMARY JUDGMENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE TRADEMARK TRIAL AND APPEAL BOARD**

NEXTEL COMMUNICATIONS, INC.,)	
)	
Opposer,)	
)	
v.	)	Opp. No.: 91/161,817
	)	App. No.: 78/235,618
MOTOROLA, INC.,	)	Pot. Mark: SENSORY MARK
	)	(911 Hz tone)
Applicant.)	
)	

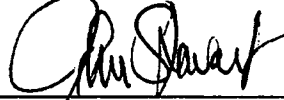
NOTICE OF DEPOSITION OF APPLICANT MOTOROLA, INC.

PLEASE TAKE NOTICE that on March 10, 2004, beginning at 9:00 A.M., at the offices of CROWELL & MORING LLP, 1001 Pennsylvania Avenue, N.W., Washington D.C. 20004-2595, or at any other location that is mutually agreeable to the parties, and continuing thereafter from day to day until completed, Sundays and holidays excluded, Opposer Nextel Communications, Inc. ("Opposer") will take by videotape and/or certified short-hand reporter the deposition pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure of Applicant Motorola, Inc. ("Applicant"), by and through one or more persons who are officers, directors, or managing agents, or other persons who consent to be deposed on its behalf, and to produce, or supplement its production of, documents concerning the subject matter categories set forth on attached Schedule A.

Applicant shall designate to Opposer, through Opposer's counsel, on or before March 3, 2005 the person or persons who are to be deposed on its behalf and shall also designate the specific subject matter categories enumerated in Schedule A upon which each such person will testify.

February 17, 2005

Respectfully,



John I. Stewart, Jr.
Attorney for Opposer

CROWELL & MORING LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-5116
361204

SCHEDULE A

DEFINITIONS AND INSTRUCTIONS

The following subject matter categories are subject to the definitions set forth below:

1. "You," "Your," or "Applicant" refers to Motorola, Inc. and any subsidiaries, parent companies, affiliated or related companies, affiliates, agents, employees, distributors and representatives.
2. "Opposer" refers to Nextel Communications, Inc., and any of its predecessors in interest and any of its employees and representatives.
3. "Document" means the original and all non-identical copies of any writing of any kind, which is known by you to exist or to have existed or which at any time has been in your possession, custody, or control, including letters, emails, envelopes, web pages, forms, affidavits, correspondence, telegraphs, telecopies, telefaxes, paper communications, signed statements, tabulations, charts, checks, appointment books, records, proposals, memoranda or other transcripts by mechanical device, by long hand or short hand recording, tape recorder or by electronic or by any other means, computer generated information, computer software, data stored in a computer, intra-office communications, inter-office communications, all summaries of all communications, telephonic or otherwise, microfiche, microfilm, lists, bulletins, calendars, circulars, advertisements, desk pads, opinions, ledgers, minutes, agreements, journals, diaries, contracts, invoices, balance sheets, telephone messages or other messages, magazines, pamphlets,

articles, notices, newspapers, studies, worksheets, telexes, cables and all other graphic materials, writing and instruments, however produced or reproduced. A document includes all documents appended thereto.

4. "Relating to" or "Relate to" means constituting, concerning, discussing, mentioning, containing, analyzing, embodying, reflecting, identifying, incorporating, describing, commenting on, referring to, considering, recommending, dealing with or pertaining to in whole or in part.

5. The connectors "and" and "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of discovery requests all responses that might otherwise be construed to be outside its scope.

6. "Including" means without limitation.

7. "The 911 Hz Tone" means the alleged mark set forth in Application Serial No. 78/235,618.

8. "The 911 Hz Tone Products" means the goods set forth in Application Serial No. 78/235,618.

SUBJECT MATTER CATEGORIES

1. Each of the responses listed by Applicant in the Answer to Notice of Opposition dated October 18, 2004, including all facts, rationale, evidence, discussions, and documents relating to said Answer to Notice of Opposition.

2. The selection, adoption, and use of the 911 Hz Tone, including:

- a. Past and current uses of the 911 Hz Tone with the 911 Hz Tone Products; and
 - b. Past and current uses of the 911 Hz Tone with goods other than with the 911 Hz Tone Products.
3. The selection of the frequency and timing of the components of the 911 Hz Tone.
4. The specific operations conducted by each of Applicant's divisions engaged in the manufacture, distribution, sale, advertising, and promotion of the 911 Hz Tone Products.
5. All internal and external discussions, meetings, studies, searches, surveys, and opinions, by and on the part of Applicant relating to:
 - a. Promotion of the 911 Hz Tone;
 - b. Incorporation of the 911 Hz Tone in the 911 Hz Tone Products;
 - c. Association of the 911 Hz Tone with the 911 Hz Tone Products; and
 - d. Consumer awareness of the 911 Hz Tone.
6. Applicant's competitors with regard to the 911 Hz Tone Products.
7. The nature, use, and channels of trade for the 911 Hz Tone Products.
8. All prior and current classes of purchasers of the 911 Hz Tone Products.
9. Advertising, marketing, offer for sale, distribution, sale, pricing, and annual sales of the 911 Hz Tone Products.

10. Advertising and promotional expenses on any annual basis related to:
 - a. The 911 Hz Tone Products; and
 - b. The 911 Hz Tone.
11. The affixation of the 911 Hz Tone to the 911 Hz Tone Products.
12. Any licensing of the 911 Hz Tone.
13. Any prior and current third-party uses of the 911 Hz Tone.
14. Any instances of actual confusion between the 911 Hz Tone and any other mark.
15. All measures taken to police or enforce the 911 Hz Tone.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the NOTICE OF DEPOSITION OF
APPLICANT MOTOROLA, INC. was served on counsel for the Applicant, this 17th
day of February, 2005, by sending same via First Class Mail, postage prepaid, to:

Ms. Carolyn E. Knecht, Attorney of Record
Mr. George Selby, Esq.
Motorola, Inc.
600 North U.S. Highway 45
Libertyville, IL 60196

